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ART. I.—*An Essay on Diet in Health and Disease.* By JOHN DAWSON, M. D., of Jamestown, Ohio.

[CONTINUED.]

DIET PROPER IN THE TREATMENT OF SEVERAL DISEASES.

To every one of any observation, the influence of a proper regimen in correcting aberrations from the common standard of health is very apparent. The physician is able to trace no small portion of his success, in the treatment of many diseases, to a proper regulation of the things designed for the purposes of nourishment; and the valetudinary may often rest his only hope of being delivered from his mental and bodily torture upon a strict observance of the rules of an enlightened system of regimen. But as these topics are fully discussed in our elementary works on hygiene, it is our intention to allude to them merely in connexion with recent

improvements—improvements growing out of researches in a branch of science which promises much in reference to enlightened views of physiology and pathology. In considering the utility of dietetic regulations in the treatment of the few diseases of which it is our purpose to speak in this paper, we shall premise the treatment of each, with some remarks on its predisposing and proximate cause, as being necessary to an understanding of the remedial relations of the different kinds of food.

*The Diet in Polysarcia Adiposa.*—Among the various shades of morbid action attributable, in any respect, to a want of proper dietetic regulations, is polysarcia adiposa, or obesity. As its name imports, this departure from the physiological condition is caused by abnormal depositions of fat in the cellular tissue and various organs of the body. With the inconveniences arising from this state of things, and the extent of the deposition, some of the members of our profession have themselves been familiar. Dr. Cheyne who was a voluptuary in the early part of his life, became so fat, that from 140 he attained the enormous weight of 448. So huge was his size, that in order to enter his carriage it was necessary to throw open the whole side of it. Instances are numerous of still greater development. Mr. Bright, of Malden, England, weighed 728 pounds; the celebrated Daniel Lambert 729 pounds; Mr. Cornelius, a native of this country, 720 pounds; and Dr. Elliottson gives the case of a child that, at one year of age, weighed 60 pounds. It is impossible accurately to estimate the great size and weight of the human body from morbid accumulations of fat. A healthy body is supposed to contain about $\frac{1}{20}$th of its whole weight in adipose matter. Approximation, however, to anything like correctness, as it regards the abnormal deposition, is from the inadequate character of the data, out of the question. Two-thirds of the weight of Dr. Cheyne, as we have seen, were referable to fat.

Concerning the circumstances favorable to the fixing of fat in the system, there is considerable unanimity of opinion.

As a general rule, those who have paid any attention to the subject regard the absence of activity, and excitement of all kinds, as indispensably necessary. Those engaged in feeding inferior animals confine them within narrow limits to prevent exercise, and allow of but little, or no muscular exertion. The plan of shutting them up in entire darkness to exclude the stimulus of light is now in many places successfully practiced. Castrating also the males, and removing the ovarian glands of the females, are measures, which from the success attending them, are universally adopted. In the human body the circumstances favorable to the deposition of fat, vary but slightly, if at all, from those to which we have alluded. In persons where there is no chance to take exercise, although the diet is generally regarded as poor and scanty, morbid accumulations of fat are very common. With individuals taking but little exercise, and living upon what is considered rich food, and stimulating drinks, this is also the case. In a short time, like Dr. Cheyne, they begin to experience the inconveniences of corpulency, which sooner or later give rise to diseases both of mind and body. After the cessation of the catamenia, practitioners of medicine notice that females are very apt to become loaded with fat, sometimes to an extent, from what we have witnessed, that embarasses the principal functions of life. Hereditary predisposition exerts no little agency in the production of unnecessary quantities of adipose matter. A fatty diathesis, if it might be so called, seems to run through many families, and is transmitted from parent to child. Possessed of this, some persons are tormented through life with the inconveniences incident to it, and what is still worse, all attempts at remedying it usually prove abortive.

The places where fat is found in the system vary according to a number of circumstances. In children it is found in greatest abundance immediately under the subcutaneous cellular tissue. Old persons have it deposited in the interstices of the muscular fibres. With the most constancy in all persons it is found in the orbits of the eyes, soles of the feet,

and ends of the fingers. The cellular tissue investing the bowels and various other organs of the body contain, as all know, large quantities; and in diseased conditions of the system it is found in the *substance* of the heart, liver, and kidneys. In his chapter on "*Adipose and Greasy degenerations of the Heart*," Hope says the heart is sometimes found overloaded with fat deposited between the pericardium and muscular substance, and penetrating at times between its fibres so as to attenuate its walls, and render them flabby. This author says, he has seen the *greasy* degeneration extend so as to occupy both ventricles. In that alteration of the liver called "*fatty degeneration*" pathologists usually find the oily principle collected in some one or more spots through the substance of the liver, being deposited like tubercle or pus. Experiments on the fattening of poultry with their feet tied, have developed the fact, that the liver under such circumstances takes on a state of hypertrophy, caused by the infiltration of fat into its cells. The kidneys, we are told by Andral, and other pathologists, are often found in a similar condition from depositions of fat in their cortical substance. The extension of the fatty exhalation has been such as to be found in connexion with almost every tissue, and the parenchyma of most of the organs. Besides in inflammation of the liver it is very common to find it in the blood. As yet none has been observed in the eyelid, the scrotum, or within the cavity of the cranium, except what belongs to the brain as one of its normal constituents.

In an investigation of the sources of the adipose deposition, some of the most intelligent medical men of the age have recently been engaged. Out of this labor much useful information has grown; but as yet it has not been entirely adequate to a solution of the problem. Boussingault is of the opinion, after making numerous experiments on the fattening of inferior animals, that the fat found in the human subject is not elaborated within the organism, but is derived from the food where it exists ready formed. The vegetable substances usually employed as food contain fat, he thinks,

in quantities altogether superior to what has been suspected, and really sufficient to account for all the fat fixed in the system. From the insoluble character of fat and the experiments of Magendie, who has so well established the fact that the chyle of animals fed on adipose substances contains a large quantity of fat, he concludes that the fat of the food passes through the blood into the organism without being changed in composition.

Opposed to the above theory are the views of Dumas. He holds that the fat is elaborated entirely within the body, and that it is the saccharine constituents of the food which undergo the changes necessary to its production. As is known, sugar may be regarded as a compound of carbonic acid, water, and olefiant gas. This author supposes that the olefiant gas may become detached from the other constituents, and, by taking different states of condensation, give rise to bodies which, by undergoing oxidation, would produce fat-acids, and consequently fats. The views of Dumas are thought to be strengthened by what is observed to take place in plants. The sugar of their stems disappears in about the same ratio that their seeds or fruits become charged with oleaginous matter; and it is said that all the palms elaborate sugar before producing oil. Bearing upon the same point also are the experiments of Huber, who found that bees fed exclusively on sugar did not lose the power of producing wax. With these proofs of the plausibility of Dumas's theory is associated the remarkable fact of the conversion of sugar into butyric acid, observed by Pelouze and Gelis. This may be done by "mixing a small quantity of caseum with a solution of sugar, and adding a sufficiency of chalk to neutralize the acid as it is formed. Placed in a temperature of 77° to 86° Fah. this mixture passes through a series of changes, the last of which is the butyric fermentation."—Boussingault.

With Dumas, the philosopher of Giessen agrees that fat is formed from the elements of the food within the organism.

Instead, however, of regarding sugar as being the constituent of the food which undergoes the change necessary to the production of adipose matter, he concludes that it is derived from starch. He gives the empirical formula of starch, and also that of fat; and shows that the conversion of the former into the latter may be effected by the separation from the starch of a certain number of equivalents of oxygen. There is but one way according to this author in which the formation of fat in the animal body is possible; and "this is absolutely the same in which its formation takes place in plants; it is a separation of oxygen from the elements of the food."

Whatever opinions may be entertained in regard to the views advanced by either of the distinguished authors to whom we have alluded, it is very certain that vegetables possess, in common with animals, the power of producing or forming fat; and in some instances of a character identical with that which is found in animals; thus the cocoa nut contains beef and mutton fat; there are certain seeds which contain horse fat and train oil; butter is found in palm oil; and human fat is found in olive oil. It is also very certain that those substances which are best calculated to promote the adipose exhalation are such as contain within themselves large quantities of fat or oil. We know also, that there is more or less of starch or sugar in all the articles relied upon in the fattening of domestic animals; and it is altogether probable that both these substances undergo transformations in the animal economy which result in the production of fat.

Having now adverted to some of the principal circumstances favorable to the exhalation of fat, the different parts of the system in which it is found, and the views of organic chemists concerning its most probable sources, we shall, in the next place, proceed to a brief review of the means available in preventing it, or in removing it after it is formed. After what has been previously stated in relation to the circumstances favoring its secretion, the conclusion cannot be resisted, that the presence or continuance of these circumstances would foil any efforts that might be made through the instru-

mentality of the food to prevent its accumulation. Instead, therefore, of indolence, quietude, and the absence of all sources of excitement, exercise of both mind and body should be rigorously instituted. Of the kinds of food best adapted to remedy a fatty diathesis, or prevent the secretion of fat, we can speak only in terms of questionable accuracy. By Boussingault, Dumas, and Payen, in concert, some experiments were undertaken that seem to throw some light upon the subject. The design of these experiments was to ascertain the quantity of fat contained in a number of the articles commonly used as food. The following are the numerical quantities of matter soluble in ether (fatty matter) in one hundred parts:

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| "Common Maize, | 8·8 | Harricots, | 3·0. |
| Oats, | 5 5 | Peas, | 2·0. |
| Rye flour, | 3·5 | Rice, | 0·8. |
| Wheaten flour, | 2·1 | Potatoes, | 0·08. |
| Beans, | 2·0 | Carrots, | 0·17." |

Whether now we regard the fat of the body as previously existing in the food, or as the result of transformations within the organism, it is very certain that those articles, viz., maize, oats, rye, &c., which according to the above table contain the greatest amount of matter soluble in ether, are acknowledged by all observers in rural economy to be the best calculated to promote the absorption of fat in the system; and it is equally certain that rice, potatoes, carrots, turnips, &c., possess very limited powers in this respect. All who have experimented with them admit, that they answer admirably for keeping animals in good condition, but are not adequate to fatten them. From such facts it is obvious that in selecting articles of food for the purpose of lessening the secretion of fat, the latter class of articles should be preferred. Rice, potatoes, carrots, &c., will evidently do more in this way than the other class of substances to which we have alluded.

Another view may be taken of this matter that also renders it plausible. Supposing fat to be formed within the organism, there is required for this purpose, in the food, a large quantity of carbon; for human fat contains about 79 per cent. of carbon. Now rice, potatoes, and carrots, are made up principally of starch and sugar, the former containing 44, the latter 39 per cent. of carbon; whereas maize, oat-meal, wheaten-flour, beans, &c., contain, in addition to what they have in their starch and sugar, large quantities of carbon in the oleaginous matter with which they are charged. The oleaginous matter of this class of articles is so rich in carbon as to approach nearly to the formula of human fat. It is obvious, therefore, that it is not material whether we regard the fat as pre-existing in the food, or as formed within the body, those substances to which we have alluded containing it in greatest abundance, would be most likely to favor its accumulation in the system; and as a consequence, in the treatment of obesity, should be avoided; and those articles substituted in their place against which such objections cannot be urged. The muscular parts of animal matter, it is believed, do not exercise much if any agency in the support of the adipose secretion.

We have already in this paper alluded to the fact that inferior animals fed exclusively on lean flesh did not grow fat. Instances too are exceedingly rare among nations and tribes subsisting almost exclusively on the flesh of wild animals, that contain in general little or no fat, of individuals in which this secretion exists in anything like great abundance. The aborigines of our country living almost exclusively on game are, as far as we have observed, quite lean. Obesity is not by any means as common among them as among the whites. The reasons for this, to some extent, may be sought for in the fact that muscular flesh has a composition identical with that of blood, as has elsewhere been shown, consisting of albumen and fibrin, organic elements that, it is probable, undergo in the organism little or no change, except what relates to their form. Besides the proportion of carbon in these ele-

ments, the principal constituent of fat, falls much below that of many other aliments animal or vegetable. It is hence a pretty safe conclusion, that muscular flesh is more concerned in building up those tissues of the system with which it is most intimately allied in chemical composition, than in the process of forming fat.

From the facts and experiments to which we have referred, it is obvious that much may be done by a right selection of diet to prevent or remedy many of the inconveniences caused by abnormal accumulations of fat. As yet, however, we are but on the threshold of this whole subject; the pathology and treatment are yet in their infancy, and much research is still necessary to enable us to understand many things which are now in the dominions of doubt.

*The proper Diet in Dyspepsia.*—This is one of the diseases the pathology of which, from its Protean character, is but imperfectly understood. Some regard it as atony of the stomach, and prescribe for it stimulants, astringents, and tonics; others make all the trouble to consist in constipation, and treat it with purgatives; others call it hypochondriasis, and administer various anti-dyspeptic medicines; the school of Abernethy look upon it as a secondary affection growing out of disease of the liver, and prescribe the black draught and blue pill; Broussais thinks all the distress due to chronic gastro-enteritis; Andral discusses all the alterations under the heads of lesions of circulation, nutrition and secretion. All of the phenomena to which we have alluded have been, without doubt, observed in connexion with what we generally call dyspepsia. Still it is doubtful whether any of the theories alluded to are in all respects correct. The malady, as all experience proves, may aaise from some inappreciable lesion of the function of innervation, unattended with any structural lesions whatever.

In his *Clinique Medicale*, Andral gives the case of a woman who entered the Pitié, and was treated for chronic gastritis; but on a *post-mortem* examination no appreciable alteration

in the stomach or any other organ was found. Again, this author tells us, that in cases where the anatomical characters are widely different, as for example, in chronic gastritis and cancer of the stomach, there are no symptoms by which the one can be distinguished from the other.

Taking into consideration the difficulty connected with a division of this subject, either as respects its pathology or symptoms, Abercrombie has hit upon one, which, for practical purposes, is about as good as any that have been proposed. He speaks of the complaint as occurring under four different forms. The first is that in which the distress takes place sometimes when the stomach is empty, at other times when it is partially full. The uneasiness attending it is of a painful character, accompanied by eructations, that in passing up the œsophagus make an acid burning impression on this organ, and also in the mouth. This is what is usually called heart-burn or cardialgia. A second form of the complaint is where there is a kind of gnawing or neuralgic pain coming on at intervals, or in violent paroxysms, accompanied with a sensation of distension, great anxiety, and extreme restlessness. In females there are often hysterical symptoms associated with the phenomena mentioned, such as the extrication of great quantities of air, palpitation of the heart, &c. *Gastrodynia* is the name given to this group of symptoms. The third form differs essentially from either of those described. It is where the pain and uneasiness commences immediately after taking food, and continues during the whole process of digestion. In most cases there is constant thirst; constipation of the bowels; a keen appetite, or perhaps anorexia; undue sensibility of the mucous membrane of the stomach, so that the ingesta produce the sensation of a foreign body in the organ. The presence of such phenomena are thought to indicate the existence of chronic inflammation. The fourth and last species of the complaint, and altogether the most difficult to manage, is where the trouble does not begin until from two to four hours after eating, and continues for several hours afterwards. Frequently, in addition to

many of the symptoms common to the other forms, there is pain or tenderness in the right hypochondrium, and as a consequence the liver is judged to be in fault; constipation, hypochondriasis, and other equally grave symptoms are also usually present. This form is what some late writers call *gastro-duodenal* dyspepsia.

To the above we might add that modification and uneasiness of the *primæ viæ* of which the distinguishing characteristic is the eructation of a watery liquid, transparent and insipid, to which Cullen gives the name of pyrosis, or waterbrash; and also that tendency seen in some stomachs to convert every kind of ingesta into acids, a striking instance of which we have been acquainted with for the last twelve years.

By some writer, perhaps Mackintosh, it is affirmed, that no physician is competent to treat a case of dyspepsia who has not experienced the disease himself. Whether this remark be true or false, it certainly contains an admission, that in order to treat the disease successfully, it requires the most consummate skill and experience. This arises in part from the fact, that while attempting to cure a patient we are compelled in many instances, in order to prevent starvation, to allow as food, that which operates as an exciting cause of the malady.

Probably in the treatment of no disease is it more necessary to ferret out what has given rise to the malady, than in the one under consideration. Out of the use of food, as is well known, this affection, in our country, more frequently arises than from all other causes combined. As a matter of course, this proceeds, either directly or indirectly, from errors respecting its quantity, its quality, the mode of taking it, or all these united.

A proper regulation of the quantity of the food, in all forms of the disease, is of superlative importance. Too much food at a meal produces over-distention of the stomach, weakness of its contrile powers, an attenuated condition of its parietes; and, if persevered in, converts the organ into a

lifeless bag, attended with all the concomitant evils of atony. Under such circumstances almost every thing necessary to be done relates to the ingesta. The food should be diminished in quantity, not suddenly, for this would probably aggravate the malady, but by degrees. If put upon the proper amount without giving the stomach time to accommodate itself to its contents, phenomena of a grave character might be the result. In a case that came under our observation sometime since, the habit had been to indulge in large quantities of food. On one occasion after a paroxysm of indigestion, the patient concluded to adopt the plan of 'starving out' the complaint by using very small quantities of the most bland and nutritious articles. Very soon the stomach became painful, and equally so when it was empty and when it contained food; a thirst for cold drinks came on, so annoying that it kept the patient in continual distress; tenderness in the epigastrium followed, and finally he had all the symptoms esteemed indicative of the existence of chronic inflammation. Having abandoned the reduced mode of living, the patient was put on such articles as were found to agree best with the stomach; and this course being persevered in for a while recovery followed. Impoverished living, using food in quantities too small to answer the purposes of nutrition, gives rise, among other bad consequences, to trouble in the organs of assimilation. Like the other organs of the body, the stomach in order to be healthy must be furnished with the materials upon which it can take exercise. Nearly all the gastric distress experienced by the lower classes of densely populated countries, is due to the want of healthy nourishment. The indication here is to increase the quantity of food to the natural standard, and the trouble is at once banished.

Of not less importance than the quantity of food is its quality. Too long a continuance on any one article, or class of articles, frequently occasions mischief. We have pyrosis among the peasantry of Ireland and Scotland, arising, as is supposed, from the too exclusive use of farinaceous diet.

Travelers tell us that it is also common in Lapland, probably depending upon a similar cause. Simply a change of articles, the use of a greater variety, is all that is here required. Cardialgia, or a confirmed tendency in the stomach to convert everything into acids, requires not only the avoidance of acids, but also of all substances readily convertible into acids. Diet that operates on antipathic principles must be instituted. Unfermented bread, vegetables containing no excess of acids, animal food of the more digestible kinds, should constitute the principal nourishment. In several forms of dyspepsia, as for example, in chronic inflammation of the stomach, the nitrogenized articles of diet, on account of their stimulating character, do not answer so well as the farinaceous, such as sago, arrow-root, potato gruel, &c. The gastro-duodenal form is, perhaps, oftener than the others, associted with great emaciation, a total loss of balance between the functions of supply and waste. The stomach in this condition, as a general rule, will bear but a small quantity of food. This, however, should contain a good proportion of the elements necessary to make blood, in order to keep the patient from running into fatal marasmus. Animal substances, eggs suitably prepared, whey, and some of the more nutritious vegetables will be found to answer the best purpose in fulfilling the indication. In some forms of the complaint the mechanical qualities of the food should not be disregarded. Mucilaginous articles, or those of a bland unirritating character, other things being equal, will suit best in chronic inflammation, or where there is undue sensibility of stomach; while for the atony and constipation associated with other forms, the white mustard seed, formerly so fashionable, or brown bread, by acting on the mucous membranes in a mechanical manner, may answer a good purpose in promoting regular egesta.

No case of dyspepsia, however, can be treated with much success, unless, in conjunction with a due regard to quantity and quality, there is also some attention paid to the mode of

taking food. The stomach, like the other organs, requires rest occasionally from its labors. Hence the practice of keeping it at work all the time upon articles not objectionable, as it regards either quantity or quality, is not only contrary to correct views of physiology, but absolutely productive of much mischief. Indispensably necessary is it that a reasonable length of time should intervene between taking meals. In cases where the stomach can bear but little food without pain or inconvenience, the time should of course be less than where something like the usual quantity can be sustained. System here, however, is of great importance, if, which in many cases is a desideratum, we would have the stomach to elaborate in a given time the means necessary to keep the patient from sinking below the point from which recovery cannot take place.

The *form* of the diet, in all the modifications of the complaint, is a circumstance of some moment. As a general rule fluid or semi-fluid articles, from the fact that they dilute the gastric juice, are less readily digested than substances of a solid form. Very few dyspeptics digest soup or broth well, whether prepared from animal or vegetable matters. Yet, notwithstanding the truth of this proposition as a general rule, when there is much irritation present in the different organs, fluids are more eligible than the solid aliments.

In concluding what we have to say on the treatment of this, the most troublesome of all curable diseases, we may state:—

1. That there are no constant characters, anatomical or functional, that will serve as a basis upon which, in all cases, to found a rational plan of treatment.

2. The appreciable lesions, when the result of errors of diet, or of other agencies, are less amenable to drugs than to an enlightened system of hygiene.

3. That the principal rules relating to a proper regimen must take into consideration the quantity of food, its qualities, nutritive, chemical, and mechanical, and manner of taking it.

4. The stomach undergoes some alterations for the relief of which the most that can be done, is to adopt the empirical plan of treatment.

*The Diet in Diabetes Mellitus.*—In this complaint, diet assumes a degree of importance which can never be disregarded by the physician without becoming obnoxious to the just charge of neglecting what is necessary to the welfare of his patient. Upon its right selection and proper regulation almost everything in the correct treatment of the malady depends. A brief statement of some of the peculiarities which characterise this singular, and, fortunately for mankind, unfrequent complaint, will perhaps be necessary before discussing the relations of its treatment to dietetics.

Passing over much connected with its origin, and the insiduous manner in which it steals possession of the system, we find the patient, among other things, complaining of passing too much urine. Instead of from two to four pints daily, there are passed, perhaps, that many quarts or gallons. Recently we had a patient under our care who, during one period of his disease, passed daily from two to three gallons. The urine has a peculiar indescribable odor, is of a more or less sweetish taste, has generally an unnatural transparency, and in consequence of the sugar contained in it, it is heavier than healthy urine. Distilled water being represented by 1000, Prout places the specific gravity of healthy urine at from 1015 to 1025; and that of diabetic urine at from 1020 to 1050. The urine of the patient to whom we alluded tasted nearly as sweet as the water of the sugar maple. As might be supposed, these alterations are connected with a dry skin, and an ungovernable thirst. With respect to the anatomical characters, nothing has been observed upon which entire confidence can be placed. Andral thinks the kidneys in most cases are in a state of hypertrophy; and Watson tells us that he has always found them very vascular. Both these changes, nevertheless, are likely to be results consequent upon the immense amount of labor the kidneys have

to perform. Compelled to secrete urine in twice or thrice the quantities of the healthy state, it would be reasonable to suppose that the substance of the organs proper, as well as their vessels, would become greatly enlarged. Notwithstanding there are no local structural changes adequate to account for the singular phenomena present in this affection, there are in every case very prominent alterations of the general system; such as a continual loss of flesh and fat, a species of marasmus that reduces the patient sooner or later to the condition of a skeleton. In the case, already mentioned, the patient in 55 days lost in weight 160 ounces; yet, notwithstanding this, the appetite during the time was good; and the amount of food consumed was more than what was sufficient for all the purposes of health. The functional lesions are very conspicuous. Most strikingly these are seen in the digestive organs. The stomach is at fault; for instead of converting the food into healthy chyme it manufactures great portions of it into sugar. Dr. Maitland found sugar in the stomach of a diabetic patient who had been living for three days previously to his examination exclusively on roasted beef; and Dr. McGregor has recently traced the existence of sugar in the blood. Such facts conclusively show that the primary trouble, instead of having its seat in the kidneys, as was formerly supposed, is due entirely to disordered digestion, to some unknown condition of the stomach, which not only renders it unable to assimilate the sugar ordinarily contained in the food, but compels it to manufacture sugar out of food that contains none.

Under the old plan of treatment it is doubtful whether a single case of the disease was ever cured. Some *apparent* cures, we are aware, have been reported, but even these are exceedingly rare. No individual of former days, however well skilled in his profession, counted any more on his ability to cure a confirmed case of diabetes, than one of genuine phthisis pulmonalis. A very prominent cause of this want of success is to be found in the fact that most of the older au-

thors regarded the affection as being intimately connected with disease of the kidneys, and to these organs, as a consequence, the most of their curative measures were addressed. As soon, however, as a change of opinion took place respecting the pathology, and the disease came to be regarded as being connected with an altered condition of the function of digestion, the indications were differently regarded. They were made to consist in restoring disordered digestion; first, by the avoidance of all kinds of food containing sugar, and secondly, by not using those kinds of food readily convertible into sugar; and, thirdly, by correcting as far as possible the diseased condition of the stomach.

Among the first who came forward with any reasonable means of fulfilling any of these indications was Rollo. He insisted upon their practicability, by compelling the patient to live exclusively on animal food; and published a number of cases in which the efficacy of his plan seemed to be fairly tested. This mode of treatment has been pretty generally adopted. But owing to the great repugnance which patients contract to the regimen, and the difficulty of keeping them upon it, practitioners have been pretty generally compelled to relax the rigor of Rollo's rules, and allow their patients occasionally to use the mixed diet. Notwithstanding this, patients fared much better than under the old plan of treatment. Seeing what was still necessary to make out a regimen, such as the complaint required, and such as would be more compatible with the feelings of the patient, it occurred to Bouchardat, that a modified bread which should consist chiefly of *gluten*, would meet the demands of the case. The *Societe d'Encouragement* had granted a prize to M. E. Martin for having isolated gluten during the preparation of starch; and he therefore applied to this eminent manufacturer to see if he could not manufacture gluten bread—bread made almost exclus vely of gluten. M. Martin, after experimenting for sometime, succeeded in making a very good article of bread by adding one-fifth of starch in order to make it light

and of an agreeable taste. This achieved, Bouchardat put his diabetic patients on animal food and *gluten bread;* and the result was highly favorable. All who have tried the plan acknowledge it a great improvement. Gluten bread of tolerable purity is readily prepared by washing the dough of wheaten flour thoroughly in water before it is baked.

It is obvious to all who have had any experience in this affection, that in order to be successful with the above plan of treatment, sugar must be rigidly prohibited. So also should be all those alimentary substances containing organic elements that are easily changed into sugar. On this account, substances containing starch, vegetable mucilages and gums, should be avoided. We see the facility with which starch is converted into sugar in germination, malting, and the ripening of fruits. There is nothing necessary to the change but the addition of the elements of water. Gum, chemists inform us, has the same composition in a hundred parts as cane sugar. It is true that it differs from that substance in its chemical habitudes; still, the fact that it is identical in composition with one variety of sugar is a sufficient reason why it, as well as the compounds so closely allied to it, should be proscribed from the food of a diabetic patient.

With regard to the quantity of the food, patients laboring under the malady have to be restricted. Associated with the other troublesome symptoms, as has elsewhere been remarked, there is a strong, craving appetite, the gratification of which, with even the proper kinds of food, seldom fails to produce gastric distress, and consequent aggravation of some of the worst symptoms of the complaint. Finally, the quantity of the food should correspond with the ability of the stomach to digest it; and all possible care should be taken by attention to this, and other things, to repair the deranged condition of the digestive apparatus.

[TO BE CONTINUED.]

ART. II.—*Remarks on Cataract; with a Case.* By WILLIAM M. BOLING, M.D., of Montgomery, Alabama.

The propriety of operating for cataract on the eye first affected, the other eye as yet remaining sound, has been a mooted question. The weight of the authority, in times past, has been decidedly against such a proceeding; recently it has been more equally balanced, and perhaps at the present time inclines somewhat in its favor.

The arguments against an early operation have been principally founded on facts or assertions like the following:—First, that one eye is amply sufficient for usual vision; consequently the patient's condition is not improved by the operation, and he therefore undergoes the pain, and incurs the risk, without an adequate object. Second, that double vision and confusion in the appearance of objects arise from the difference in the foci of the two eyes, caused by the removal of the lens from one only.

It is strange that such objections should be allowed to have such weight, and it is surprising to see the latter especially, which may be so easily removed by properly adapted convex glasses, assigned by learned authors.

In regard to the former; although a very useful degree of vision may be enjoyed with one eye only, he is "*rara avis in terris*" indeed, who could think, after a successful operation which had restored to him the use of the other, that his condition was not improved, and that he had "incurred a risk without an object."

The principal ground on which an early operation is urged is, that it will probably prevent the formation of a cataract in the other eye. In support of this, cases are recorded by the best authorities, in which the spontaneous removal of an incipient opacity of the crystalline lens has taken place, on the removal of a cataract from the other eye. This is accounted for by the peculiar and intimate sympathy existing

between the eyes, by which the sound one frequently takes on diseased action similar to that existing in the one first affected. Wardrop makes mention of a peculiar inflammatory affection which takes place in the eye of horses, producing disorganization of the internal structure, and states the fact, that its progress in the eye last affected is arrested by its removal from the one primarily diseased. In this country, the practice is not uncommon with farmers, under like circumstances, to remove the disorganized eye when the other becomes 'weak.'

It may be enquired, however, whether the predisposition to cataract manifested by its formation in the first eye, and the continuation of other causes which may have led to it, are not in many instances the cause also of its development in the second? This is a natural inquiry, and facts in all probability give it a positive answer. Under such circumstances, the removal of the first cataract would exert no control over the existing predisposition, and would probably not prevent, ultimately, the development of a second; still as some of the causes leading to such a result would thereby be removed, its progress, we may suppose, would be less rapid.

Even where no peculiar predisposition to cataract might be thought to exist, and without the intervention of this intimate sympathy between the eyes, the mere occurrence of blindness of one eye, from any other cause whatever, by throwing the labor of vision entirely on the other, entailing thus upon it a double amount of duty, may probably in some cases lead to the development of cataract in it. Supposing this to be true, it may also be urged, among other reasons, for the early removal o cataract existing in one eye only. The following case is one in which cataract was probably caused by the increased exertion of the organ, rendered necessary by the previous loss of vision in the other. There is no reason to suppose that any predisposition to cataract existed, or it would have been produced by the violence sus-

tained by the eye first affected; while the agency of sympathy between the eyes in its production is rendered improbable, by the dissimilarity in the character of the affections of the two organs.

Case.—Nat. Newman, mulatto, aged 39 years, received twenty years ago a blow in his right eye with an ear of corn. Pain and inflammation followed, which in a short time were removed; but at the end of three years from the time of receiving the injury, the eye was entirely blind. Shortly after the entire loss of vision in the right eye, the sight of the left began to fail, and in two years more was also entirely lost. On the 20th of August last his eyes presented the following appearance. The pupil of the right eye was clear, of natural size, but almost entirely immovable. The amaurosis was complete; with this eye he had not the slightest perception of light. Of the left eye, the lens was opaque, the cataract being of a perfectly white color. With this eye he had a slight perception of light—sufficient, when in a dark room, on a bright day, with one window open, to enable him to discover its position. The conjunctiva of the eyes were somewhat inflamed, and the tarsi considerably so, and also thickened. By the removal of a few inverted cilia, which seemed to be measurably the cause of the conjunctival disease, and the use, night and morning, of mercurial ointment, with creosote, and one or two applications of nitrate of silver, this condition was in a great measure removed.

On the 4th of September I couched the cataract of the left eye, and his vision immediately after was such, that he could distinguish faces, and without difficulty could tell any number of fingers held up before him.

The ultimate termination of the case was unfortunate. The childish delight he felt in consequence of the restoration of the long lost function, caused him to exert and expose the organ more than was prudent; nor were admonitions to a contrary course availing. A high degree of inflammation

was thus excited, which his age prevented me from treating with the activity necessary for its removal. Secondary cataract and eventually almost entire disorganization of the eye followed.

March, 1846.

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ART. III.—*Medical and Obstetrical Cases.* By FRANCIS H. GORDON, M.D., late President of Clinton College, Tennessee.

*Retained Placenta.*—May 31st, 1844, I was called in haste to see Mrs. L., æt. 30 years, who had aborted twenty-four hours previously, being about three months and a half advanced. Two very old ladies, long practiced in midwifery, informed me that the difficulty was some unnatural growth in the womb. Upon examination, I pronounced it to be the placenta attached to the walls of the uterus; but the old women could not be convinced till I pinched off a portion and exhibited it to them. There was considerable peritoneal tenderness, the womb was not inclined to paroxysmal action, but quite sore, with its cervix dilated so as to admit the fingers with difficulty. Pulse feeble, and 110 per minute.—Gave stimulants to no advantage. Ergot, ʒss was administered every half hour, till three does were taken, without inducing uterine action. Tried artificial irritation, and external friction and pressure; but all was of no avail. Conceiving it impossible to extract the placenta by any plan that was safe to the woman, I determined to leave the matter to nature, unless future circumstances should demand interference. Directed one alvine evacuation to be procured daily with castor oil; a fourth of a grain of acetate of morphia to be given whenever she was restless; warm water to be freely thrown up the vagina every day; and a stream of warm water to be directed for three hours every day upon the abdomen, and to be followed by poultices of warm wheat bran, large enough to cover the whole surface.

No marked paroxysmal contraction ever took place, but the placenta gradually came away in a dissolved state, almost unconsciously to the patient; and her health gradually improved for about two months, when recovery was complete. She has since been delivered, at full term, of a healthy child.

*Tetanus from sudden arrest of the Catamenia.*—November 3d, 1843, I was called in the night to Miss V., æt. 16 years, of vigorous constitution. Two days before she had been caught in a shower of rain during the menstrual flow, which caused a sudden cessation of the secretion. On the 3d, at about 4 o'clock, P.M., she was suddenly seized with pain in the epigastrium, and tetanic spasms. I found her supine, every muscle rigid, and resting upon the occiput and heels, the trunk forming an arch between these extremities; her pulse nearly natural. The teeth continued so firmly clenched, that internal remedies were out of the question. I heated an iron poker, and the handle of a frying pan to a red heat, and using them alternately managed thus to keep a hot iron passing along the tract of the spine, within an inch of the skin, for about five minutes, when general relaxation suddenly ensued. The skin did not blister from the hot irons, though several spectators thought it must be literally roasted.

I treated the case with opium, sulph. ether, carb. ammonia, calomel and ipecac. The paroxysms, of about one hour's duration, returned at irregular intervals five or six times a day until the 12th, when the patient was left free from pain, soreness, or disease of any kind, being at once apparently in perfect health.

I should have remarked, that a blister was drawn with cantharides along the cervical and three or four dorsal vertebræ. One singular feature of this case was, that during the interval of relaxation the young woman displayed all the symptoms of nymphomania, and would not take a single dose of medicine unless it was given her by a young gentleman;

evincing passionate fondness for any young man in five minutes who might chance to enter her room.

On the 13th I dismissed her cured, and directed warm teas, pediluvia, &c., to be used at several successive menstrual periods, so as to induce a regular return of the uterine secretion. The plan was successful as long as followed; but it was neglected at the fourth period, and I was summoned to see her on the 6th of March, 1844, in precisely the same condition as in November. Bled her 30 ounces; she vomited and was generally relaxed. Directed 6 grains of calomel and 2 grains of Dover's powder to be given every four hours until three doses were taken, to be followed by castor oil, and a blister to the nape of the neck. The spasms returned at irregular intervals till the 9th, when there was complete recovery. By being careful to promote menstruation at each regular period, the lady remained apparently healthy until the 22d of September, 1844, when I saw her laboring under an attack of autumnal fever. For two or three days she had spasms as in the other two attacks. A blister to the nape of the neck, and the usual treatment of fever, relieved her in a week, and her health has been excellent up to this time.

*Traumatic Neuralgia.*—Mrs. P. æt. 40 years, being far advanced in utero-gestation, was bled, June, 1843, in the foot, by a neighbor, and in the operation a branch of the external tarsal nerve was wounded.

August 17th. I was requested to visit her, and on doing so found her laboring under symptoms of hysteria; such as anxiety, flushed countenance, dyspnœa, and vertigo, with prominent eyes and vacant stare. The foot was swollen, and a little painful. Firm pressure along the course of the nerve gave relief, but a slight titillation caused intense pain. By this mode of procedure the wounded nerve could be traced to the sacrum. The patient also suffered from bronchocele, the tumor being so large as to obstruct the cerebral circulation. Friction along the vertebral column gave in-

stant relief to the most distressing symptoms. Prescribed morphia and blue mass. Under the influence of these remedies she enjoyed partial comfort till the first of October, when she was delivered of a healthy child. Meantime iodine had been employed so as considerably to reduce the bronchocele. After delivery she suffered extremely, and in four weeks lost in weight more than seventy pounds. The pains were periodical, returning every evening with fever, and passing off towards morning with copious perspiration. The foot and entire limb were slightly swollen, and the whole length of the vertebral column was intolerant of heat or pressure. She slept but little, was anxious, restless, without appetite, and emaciating rapidly. Under these circumstances a caustic issue was established in the old cicatrix where the nerve had been wounded; the whole limb was bandaged, pustules from ointment of tartar emetic were kept up along the spine; half a grain of acetate of morphia was given whenever the patient was restless, or in much pain; two grains of sulphate of quinine were directed every two hours, from daylight till noon daily; and her bowels to be kept open with aloetic pills, alternated with blue mass and ipecacuan, *pro re nata.* Under this plan, the woman gradually improved; the pains almost ceased; her appetite returned; some increase of flesh was manifest; she slept well, and, in fine, considered herself rapidly convalescent.

Feb. 9th, 1844. She was attacked with typhoid fever, which brought back all the former symptoms with aggravated violence. One singular symtom now showed itself, surpassing anything I ever saw: the heart, as if hypertrophied, took on the most violent action, so as visibly to shake the patient all over, and to communicate a constant tremulous motion to her couch. It never ceased a moment while the patient lived. My excellent friend, Dr. Gowen, who attended the case with me in consultation, well described the phenomenon as "*a thundering of the heart.*" No treatment from this time afforded more than partial relief; and death occur-

red on the 26th, seventeen days after the supervention of fever.

*Lunar Caustic in Burns.*—During the autumn of 1840, while the writer was performing a set of experiments in chemistry before a class, a burn was accidentally received in the following manner. In getting out some phosphorus to light a spirit lamp, a little of it dropped into a box of mineral specimens under the table. Being unable to find it readily it was left in the box and forgotten until it got into a blaze. To save the minerals from injury, I attempted to run my left hand under them and the phosphorus and throw all out together; but instead of this, I ran the index and middle finger directly into the blazing phosphorus. The piece, about an inch long, stuck to my fingers, and before I could plunge them into the pneumatic trough, it completely roasted them from their extremities to the second joints. The pain exceeded in intensity any thing that ever I suffered.

But silver and its compounds being the subject of the lecture, there was fortunately a solution of the nitrate on the table, and as soon as reflection returned I plunged my fingers into the caustic liquid. Relief was prompt, and so great that in a few minutes the lecture was resumed. It was then about 3 o'clock, P.M.; there was slight pain in the fingers till 9, when I fell asleep and suffered no more from it afterwards. Hard crusts of sphacelus shielded the diseased parts till they were thrown off by reproduced flesh beneath. My fingers are now as perfect as ever in shape and motion, and no one could discover a cicatrix.

*Clinton College*, March, 1846.

ART. IV.—*A Case of Alarming Hemorrhage from the Bowels in a little girl, caused by the detachment of a Polypus.* By Dr. M. H. FEE, of Leatherwood, Indiana.

On the 13th of last September, I was hastily summoned to visit C. M., daughter of C. A. B., æt. 10 years. On my arrival I learned of Mrs. B. that an hour before, the little girl had a bloody discharge from her bowels amounting, according to her estimate, to something more than a quart. There was also discharged at the same time, what I considered, from description, to be a polypus, said by the parents to be somewhat larger than a partridge egg, of oval form, studded over the outer surface with hemispherical prominences, filled with a sero-purulent fluid, the peduncle being about the size of a large goose quill. It was left on the ground where it was examined, and before my visit had been swallowed by the poultry. I found the little patient much prostrated, with pulse scarcely perceptible, cold extremities, a sense of stricture at the præcordia, and distressing nausea. I directed warmth to be applied to the feet, while I prepared and administered the following mixture: tinct. opii gtt. 20, spts. ammon. gtt. 10, acet. plumb. gr. 1½.

In a short time after the administration of the draught, there was decided relief of the præcordial distress, as well as of the nausea, and the coldness of the extremities; and in about half an hour she had another bloody discharge, entirely different from the former; this being mostly clots of grumous blood while in the former, the blood was perfectly liquid. The last discharge amounted to about three gills. In an hour and a half after the administration of the draught, I repeated the remedy in half the dose.

Returning a few hours afterwards, I found my patient suffering with acute pain in the head which was aggravated by the least jar or noise, her face flushed, and eyes injected. At first sight I feared lest I had carried stimulation too far; after feeling the pulse, I became satisfied that this was not the case, but that the symptoms arose from loss of blood. In ac-

cordance with this view of the case I mixed twenty drops of the spirits of ammonia, with four tablespoonfuls of water, and gave a tablespoonful of the mixture, every fifteen minutes until three doses were given; when her head became easy, and she fell into a gentle slumber. I left some laudanum and acetate of lead to be given in case the hemorrhage should return.

Sept. 14th. Found my patient laboring under some excitement, and headache, from a chill which she had at nine o'clock this morning. The fever was soon reduced by spts. nitre; and her head relieved by cold applications. Ordered castor oil ℥ss., oil of turpentine 15gtt., to be taken immediately. Had had one small grumous discharge during the night.—Discontinued the saturnine preparation, and the opiates.

Sept. 15th. Found my patient in a strong rigor. It was now clear that this was a regular intermittent of the quotidian type. Ordered a solution of 16grs. of quinine in two ounces of water, of which two teaspoonfuls to be taken every two hours, after the decline of the slight febrile excitement; also castor oil ℥ss., and oil of turpentine 20gtt., to be taken this afternoon. The oil and turpentine of yesterday had produced two alvine dejections, feculent, and free from every trace of blood.

16th. Found my patient greatly improved; no chill; two feculent discharges; had been up, and walked from the bed to the fire-place, without assistance. Ordered quinine to be continued in small doses, hourly, for a few days, with wine, and generous diet; bowels to be moved by castor oil and spirits turpentine in the afternoon.

17th. This morning made my last visit to my patient; found her sitting up; fast improving in appearance and strength. From this time, her convalescence was rapid.

This little girl had been, for several years, of a sickly appearance, sallow complexion, with constant præcordial distress, and weak digestive powers. She was thought to be troubled with worms.

I had been frequently called to see her, and had invariably

prescribed for the verminose symptoms, but without at any time effecting any considerable discharge of worms, the symptoms persisting, though with abated severity. She even became paralytic at times; and frequently quite unconscious, as if sitting up asleep, and in that posture showed no tendency to fall. In a word, the case exhibited, at times, all the characteristic marks of catalepsy. Suspecting that tapeworm might be the cause of the evil, I had taken steps to procure remedies for it when the discharge of blood, and of the polypus came on, and changed my diagnosis of the affection. It may still be a question whether this polypus, so inconsiderable in size, was capable of producing so much constitutional disturbance, and especially so serious a derangement of the nervous system. I am free however to say, that notwithstanding the apparent inadequacy of the cause, it was, to my mind, the sole cause of the complaint. In proof of the correctness of this opinion we have the fact, that the girl has regained her health perfectly since the polypus passed away, and is now free from all symptoms of disease.

February 24th, 1846.

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ART. V.—*A Case of Purpura Hemorrhagica.* By W. D. HARRIS, M. D., of Utica, Mississippi.

The following case which occurred in my practice being of a somewhat novel character may not be uninteresting, I hope, to some of the numerous readers of the Journal.

October 9th, 1845. I was called to visit Miss M. S., aged 23 years, of small size, dark hair and complexion, health and constitution delicate from childhood, whom I had attended sixteen months previous for spinal irritation, together with a slight affection of the uterus, and considerable bronchial difficulty, with pain in the left side, &c.

When I arrived on this occasion, I found her laboring under the following symptoms: hemorrhage from the nose, somewhat profuse, of 30 hours duration—also from every part of the body, as well as the head, neck, and face; the blood oozed out through the pores of the skin, resembling mosquito bites, in some places in clusters thicker than others. Knowing her constitution to be delicate, I supposed that there must be some derangement of the catamenia; but on inquiry found that her health in that respect was as good as usual. Previous to my visit, she had been under the care of a talented quack for a pain in the side, with some debility of the lungs, for which she was using externally veratria ointment, and taking internally deutiodide of mercury, with iodide of potassium, up to the time when I made my first visit; I prescribed alum water to the nostrils and a plug saturated with the same to be inserted into the nose; wash for the body, dilute acid of vitriol; gave a blue pill and sulph. quinine sufficient to move the bowels; spirits of nitre and paregoric as a diuretic in teaspoonful doses every three hours, and Dover's powder sufficient to allay nervous excitability, and procure rest.

10th. Saw my patient at 9 A.M.; found her relieved from the hemorrhage of the skin, but from the left nostril blood still continued to flow freely. Medicine had moved the bowels; tongue clean; pulse 100. The dilute oil of vitriol had a beneficial effect on the skin, though attended in its application with some nervous excitement, which was allayed by Dover's powder.

As I looked on the hemorrhage as passive from the beginning, I prescribed dilute creosote to the nose with a plug; oak-bark and alum wash to the skin, and gave sulph. quinine in 3 grain doses alternarely with Dover's powder in 5 grain doses every four hours, and persesquinitrate of iron in 12 drops three times a day; kept the bowels open with mild cathartics.

11th. Found my patient still bleeding at the nose, though less profusely; pulse feeble, beating 110 per minute; skin

soft; patient had spent a restless night, attended with strong hysterical symptoms, and slight derangement of intellect at times. Continued the creosote to the nose, finding it to be the best among the many remedies that were tried. Ordered the alum hip-bath; continued the quinine and Dover's powder, and gave 10 drops of tinct. iodide of iron instead of the nitrate. Her mouth now was slightly touched with the mercury, either the blue pill, or the stronger preparations which she had been taking before my first visit.

12th. Saw her this morning in consultation with my friend, Dr. Bush; found her very much as on the day previous; continued the same treatment, adding the compound tinct. of catechu to be applied to the nose and given internally.

13th. Still bleeding at the nose, though much less profusely; continued the creosote, as it seemed to be the only application which was of any service; symptoms much the same as yesterday; hysteria still continues; treatment the same, only syrup morphine added to control the nervous irritability.

14th. This morning found my patient relieved from hemorrhage from the nose; pulse small and frequent; skin moist; extremities cool; exceedingly feeble and easily excited to crying or laughter; mouth sore, and cheeks swollen, notwithstanding the bowels have been opened every day with mild cathartics. This day the catamenia came on, and at times was somewhat profuse, producing the greatest alarm, but all persuasions of her mother or myself were unavailing to induce her to suffer any local application to be made.—Continued general treatment; added tinct. myrrh in drachm doses. She now began to improve slowly, and was furnished with such medicines from the shop as her condition required from time to time.

Dec. 3. Was called to my patient again; on arriving I found her laboring under uterine hemorrhage in the strict sense of the word. This of course produced much alarm. I explained the nature of the case, and assured her that there

was no danger, as it was of very frequent occurrence though not in unmarried women. It readily yielded to the usual treatment; since which time she has recovered her usual health and spirits.

I might mention in conclusion that this young lady belongs to one of the best families in the farming community, who never knew want, or participated in luxurious indulgences. I present the case as it occurred without comment. How far the powerful agents she was using had any share in producing the state of things above recited I shall not attempt to determine. The pathology of purpura is still involved in great obscurity. The multiplication of cases must ultimately clear it up. In that view, I trust the one which I have given may be found to be of some value.

March 10th, 1846.

# REVIEWS.

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ART. VI.—*Animal Chemistry with reference to the Physiology and Pathology of Man.* By J. FRANZ SIMON, Fellow of the Society for the advancement of Physiological Chemistry at Berlin, &c., &c.—Translated by THOMAS E. DAY, M.A. and L.M., Cantab., Licentiate of the Royal College of Physicians. To be complete in 2 parts. Part 1. Philadelphia; Lea & Blanchard. 1845. 12mo. pp. 292.

We closed our former article on this work with a table of the constituents of the blood as affected by pneumonia biliosa, in a case of which it was shown that the fibrin had risen to the extraordinary height of 12·72 in a thousand parts.

The author next gives the results obtained by Andral and Gavarret in their analysis of pleuritic blood. The increase in the fibrin was found by these chemists to be from 3, the healthy standard, to 4, 5·9, and 6, according to the stage of the disease, being greatest when the pleuritis was not yet advanced, but where effusion had taken place, and less in the more advanced periods of the affection. In five cases of pleuritis Becquerel and Rodier found the mean proportion of fibrin to be 6·1.

In peritonitis the increase in the fibrin was not observed by the author to be so great as in pleuritis, but still in that form of the complaint denominated puerperal fever he found that it amounted to twice as much as in healthy blood. Andral and Gavarret found it even as high as 6·1 and 7·2.

"In a woman, aged 24 years, attacked with metroperitonitis, Scherer observed a tolerably large buffy coat, apparent-

ly more gelatinous than tough. The clot was rather large, but not very firm. The serum was neutral.

The blood contained in 1000 parts:

| | |
|---|---|
| Water, | 814·53 |
| Solid constituents, | 185·47 |
| Fibrin, | 5·32 |
| Albumen, | 96·35 |
| Blood-corpuscles, | 70·16 |
| Fat and extractive matters, | 6·02 |
| Salts, | 7·13 |

Two days after the blood contained:

| | |
|---|---|
| Water, | 832·58 |
| Solid constituents, | 167·42 |
| Fibrin, | 4·02 |
| Albumen, | 100·25 |
| Blood-corpuscles, | 52·30 |
| Salts and extractive matters, | 11·42 |

The buffy coat had a more gelatinous appearance, and the serum was redder than on the former occasion. Death occurred two days after the second venesection."

The same increase of fibrin was noted in inflammation of the uropoietic viscera. In a case of cystitis the blood examined by Andral and Gavarret gave 5·4 of fibrin. Rheumatism develops this principle very sensibly, and the increase seems to bear some proportion to the intensity of the pain. Thus, says our author:

"The blood will be found to contain as large a proportion of fibrin at the commencement of a rheumatic attack which begins very severely, as at a much later period in a case commencing mildly, but in which acute pain gradually supervenes. This will be seen from the following analyses:

| | Venesection. | Day of disease. | Water. | Fibrin. | Blood-corpuscles. | Residue of serum. |
|---|---|---|---|---|---|---|
| 1st Case, | 1 | 4 | 797·1 | 8·9 | 109·3 | 84·7 |
| | 2 | 5 | 796·9 | 9·8 | 107·5 | 81·8 |
| | 3 | 6 | 812·5 | 8·5 | 95·4 | 83·6 |
| | 4 | 10 | 820·6 | 6·4 | 93·5 | 79·5 |
| | 5 | 25 | 789·7 | 2·8 | 117·9 | 89·6 |

| | Venesection. | Day of disease. | Water. | Fibrin. | Blood-corpuscles. | Residue of serum. |
|---|---|---|---|---|---|---|
| 2d Case, | 1 | 8 | 778·8 | 6·1 | 123·1 | 92·0 |
| | 2 | 9 | 780·9 | 7·2 | 120·7 | 91·2 |
| | 3 | 10 | 788·0 | 7·8 | 112·8 | 91·4 |
| | 4 | 13 | 799·0 | 10·2 | 101·0 | 89·8 |
| | 5 | 17 | 813·9 | 9·0 | 89·2 | 87·9 |
| | 6 | 28 | 826·2 | 7·0 | 83·8 | 83·0 |

"In the first case, the maximum of fibrin is found in the blood taken at the second venesection, and as early as the fifth day of the disease. In the second case, on the contrary, it did not occur until the fourth venesection, upon the thirteenth day of the disease, when nearly all the joints were reported to be in a swollen and painful state. These symptoms began to diminish after the next two bleedings; the fever, however, still continued."

In erysipelas the fibrin has been found in as large a proportion as 7·3, while in milder cases of the malady, attended with but little fever, it has amounted to only 3·6. The quantity seems to be determined rather by the severity than the extent of the affection, for in a case of erysipelas of the hand the blood yielded 7·71 of fibrin. In one of the face, it was only 5·45.

The blood of phthisical patients is inflammatory. The clot is small, consistent, and covered with a buffy coat; the serum is clear, and of a bright yellow color, during one period of the disease; but the blood differs considerably in the progressive stages of consumption. As the tubercles soften the quantity of fibrin increases to 4·5, in some instances; and when vomicæ form in the lungs may rise to 5·5, or even 5·9, but never attains the height observed in pneumonia. In the very last stage of the disease, as the blood becomes poor, the fibrin diminishes, and even falls below the healthy standard. As the changes in the blood attendant upon phthisis are particularly interesting we copy from the author the following tables and observations:

"I have made three analyses of the blood of phthisical persons, the results of which are not devoid of interest.

| | Analysis 26. | Analysis 27. | Analysis 28. |
|---|---|---|---|
| Water, - - - | 807·500 | 825·200 | 750·000 |
| Solid residue, - - | 192·500 | 174·800 | 250·000 |
| Fibrin, - - - | 4·600 | 6·500 | a trace. |
| Fat, - - - - | 2·350 | 4·200 | 3·750 |
| Albumen, - - - | 93·360 | 90·350 | 131·000 |
| Globulin, - - - | 71·230 | 61·110 | 94·500 |
| Hæmatin, - - - | 3·110 | 2·690 | 2·750 |
| Extractive matters and salts, | 9·350 | 8·000 | 15·250 |

"The blood in analysis 26 was taken from a man aged 36 years, in the second stage of tubercular phthisis, who afterwards sunk under the disease. The blood in analysis 27 was taken from a man aged 41, in the third stage of the disease, who suffered extremely from nocturnal colliquative sweats, and from feverish symptoms. In these two instances the blood exhibits the characters of hyperinosis, for the quantity of fibrin is in one instance twice, and in the other thrice the normal amount, and the amount of hæmato-globulin is below the healthy standard: moreover, the quantity of solid constituents is less than in healthy blood. Andral and Gavarret's observations respecting the changes that the blood undergoes as the disease advances are here borne out.

"The 28th analysis gives results quite at variance with the two former. The blood in this instance was taken from a man about 30 years of age, who was treated in our hospital for tubercular phthisis. He had taken cod-liver oil for sometime with much benefit; subsequently, however, frequent attacks of hemoptysis came on, for which venesection was always immediately prescribed. The clot in these cases was seldom very firm. I analysed the blood taken at his last venesection. It was received into a shallow vessel, and amounted to between six and seven ounces. It did not coagulate, and it presented the appearance of a homogeneous dark red fluid, in which some white gelatinous flocks of coagulated fibrin were swimming.

"The blood contained, much to my surprise, a larger amount of solid constituents than I have ever observed in any other analysis. The fat, when isolated, smelt strongly of the volatile fatty acid of the cod-liver oil, the odor of which was also strongly developed during the evaporation of the blood to dryness. A considerable quantity of hæmaphæin was present, and deeply colored the extractive matters and salts. It is very probable that the peculiar changes in the blood in this instance are due principally to the cod-liver oil and to the repeated bleedings."

The opposite state of the blood to the one we have been considering, is styled by Dr. Simon *hypinosis;* and this is exhibited in typhus, intermittent and continued fevers, variola, and varioloid. rubeola, and, according to our author, in scarlatina. This is more than we were prepared to expect. Assuredly in scarlatina we should have looked for an increase in the amount of fibrin; and in some of the analyses of Andral and Gavarret this was the case. In two they found it nearly normal in quantity, in one 4·0, and in one even as high as 5·8. But scarlet fever is a disease the character of which varies exceedingly in different constitutions. and during different epidemics. It is therefore difficult to assign to the blood in that complaint any specific condition. In one case it might exhibit even a deficiency of fibrin, while in most others the blood would show evident signs of inflammation. In typhus the fibrin is for the most part normal in quantity, very seldom, and then only slightly, above the mean, and often decidedly less than it is found in healthy blood. It fell as low as 1·6 in one case cited by Dr. Simon. In .neasles it varied from 2·4 to 3·4, being little altered from its natural state. In intermittent fever its maximum, in the cases investigated, was 3·8 and its minimum 3·0. The author thus sums up:

"The composition of the blood in hypinosis is essentially the reverse of that in hyperinosis. The amount of corpuscles is increased. that of fibrin is diminished, and the solid constituents generally are increased rather than diminished; while in the phlogoses they are most commonly below the normal standard. We have seen in the previous analyses that in proportion as the febrile symptoms assumed the form of erethismus, the characters of hypinosis became less marked; and, on the other hand. that when they took on a torpid type these characters were more strikingly developed."

The third form of diseased blood described by Dr. Simon he styles "*spanæmia,*" the meaning of which is *poor blood,* the vital fluid being in that case especially deficient in fibrin and blood-corpuscles. Some of the diseases in which this condi-

tion is presented are cancer, scrofula, chlorosis, purpura hemorrhagica, and petechial typhus, all of which are characterized by anemia. It is the experience of the author, in which he supports Andral and Gavarret, that the solid constituents of the blood, and especially the globulin, are increased by ferruginous preparations. Confirmatory of this fact Dr. Simon gives the following tables, the first showing the constitution of the blood of a chlorotic girl when first subjected to treatment; the second exhibiting it at the end of seven weeks, during which time she had taken two ounces of the tincture of iron, and sixty-four grains of metallic iron.

| | Analysis 32. | Healthy blood. |
|---|---|---|
| Water, | 871·500 | 795·278 |
| Solid constituents, | 128·500 | 204 022 |
| Fibrin, | 2 080 | 2·104 |
| Fat, | 2·520 | 2·346 |
| Albumen, | 79 820 | 76 660 |
| Globulin, | 30 860 | 103 022 |
| Hæmatin, | 1·430 | 6 209 |
| Extractive matters and salts, | 11·000 | 12 012 |

The hæmato-globulin contained 4·4% of coloring matter.

| | Analysis 33. |
|---|---|
| Water, | 806·500 |
| Solid residue, | 193·500 |
| Fibrin, | 1·200 |
| Fat, | 2·299 |
| Albumen, | 81·230 |
| Globulin, | 90 810 |
| Hæmatin, | 4·598 |
| Extractive matters and salts, | 9·580 |

The hæmato-globulin contained 4·8% of coloring matter.

Purpura hemorrhagica, though placed in this connexion, does not appear to exhibit the characters of spanæmia, but shows, as will be seen by the following analysis, a great deficiency of fibrin.

| | |
|---|---|
| Water, - - - - - | 795·244 |
| Solid constituents, - - - | 204·756 |
| Fibrin, - - - - - | 0·905 |
| Blood-corpuscles, - - - | 121·701 |
| Residue of serum, - - - | 83·405 |

The fourth form of diseased blood our author calls *heterochymensis*, upon which he makes the following explanatory remarks:

"I arrange under this form all those states of the blood in which a substance is present that does not exist in the normal fluid: when, for instance, the blood contains urea (in appreciable quantity,) sugar, coloring matter of the bile, fat, pus. The circumstances that lead to the establishment of this diseased condition of the blood are far less natural than those which are connected with the production of the three former classes. The arrangement is artificial, and merely adopted for convenience, since this class of disease has simply this property in common, that the composition of the blood is here *qualitatively* changed, whilst in the three former it is only altered *quantitatively*. The putrid form of typhus, the yellow fever, and the plague, certainly might have been placed in the class, since coloring matter of the bile, and a salt of ammonia, are often found in the serum. I have, however, thought it best to place these diseases in the third class, because, in the first place, the presence of the abnormal constituents is not constant; and because, secondly, in consequence of the deficiency in the solid constituents of the blood in these disorders, they naturally occur under the class spanæmia."

In the *morbus Brightii* the result of numerous analyses indicates a decreased quantity of solid constituents, a small amount of blood-corpuscles, and the presence of *urea* in the blood. *Sugar* has been detected in the blood of diabetic patients; *bile* appears in some of the affections of the liver; and according to Gulliver, *pus* is "found in the blood in all diseases in which there is suppuration, or even inflammatory swelling, accompanied with hectic fever." But, worse than all, this fluid, it seems, is sometimes infested with *animals*. Our author informs us that

"Dr. Chiaje, of Naples, has recently stated that he found the polystoma sanguiculum in the expectorated blood of two phthisical patients who were attacked with hæmoptysis.—Some of these small flat worms, which are similar to leeches, were floating about in the serum, others attached themselves to the sides of the vessels."

The London Lancet, for 1840, gives similar cases. Dr. Goodfellow found an immense number of animalculæ in the blood of a fever-patient. In the blood of a boy laboring under influenza Mr. Bushman saw "*worms half an inch long.*"

> "Can such things be,
> And o'ercome us like a summer's cloud,
> Without our special wonder!"

From a number of analyses of the blood of *pregnant women* it would appear that the composition of that fluid is materially affected by pregnancy. In density it is diminished; the water, the fibrin, and the phosphorized fat are increased, while the albumen and corpuscles are diminished. The menstrual blood was subjected to analysis by Becquerel and Rodier, and the results are stated by Dr. Simon in the following paragraph:

"The most striking peculiarities of this blood are, the total absence of fibrin, and the increase of the solid constituents caused by the excess of the blood-corpuscles. The hæmatoglobulin was found to be very rich in hæmatin, combined, undoubtedly, with a considerable amount of hæmaphæin; the coloring matter amounted to 8·3% of the hæmato-globulin."

The blood of the lower animals has been investigated with great care by several chemists, and the chief results are quoted at the close of this volume, where an account is also given of lymph and chyle. We shall not follow him into these details having now presented so much of the work to the readers of the Journal as will enable them to judge of its character. As a repository of facts in animal chemistry, no volume yet published in our language can compare with it.

ART. VII.—*Clinical Lectures on Surgery, delivered at St. George's Hospital.* By SIR BENJAMIN C. BRODIE, Bart. V.P.R.S.; Sergeant Surgeon to the Queen; Surgeon in Ordinary to his Royal Highness Prince Albert, &c., &c., &c. Philadelphia: Lea & Blanchard. 1846. 8 vo. pp. 352.

The introductory lecture to the course of lectures comprised in this volume predisposes one strongly in favor of the volume and of its author. It breathes so kindly a spirit, manifests so lively an interest in the inexperienced young student, cast among strangers in a populous city, and points out with so much good sense the course of study and behavior to be observed, that the reader sets out fully certified of the benevolence of the author's heart, as well as of the soundness of his head. Sir Benjamin Brodie's is a name familiar to the American profession, and his clinical lectures, now made available, will increase his popularity on this side of the Atlantic. They will be found to be characterized, in a striking degree, by clearness of language, good sense, and a practical bearing. The course embraces thirty-nine lectures in which the following subjects are discussed: Some of the important circumstances connected with operative surgery; mortification; inflammation of the veins; varicose veins and ulcers of the legs; corns and bunions; polypi of the nose; non-malignant tumors of the tongue; paralysis; extraction of foreign bodies; fistula in ano; fatty steatomatous tumors; sero-cystic tumors of the breast; scirrhus of the breast; the administration of mercury in syphilis; local nervous affections; various forms of local hysterical affections; diseases of the hip joint; tic douloureux; hemorrhoids; prolapsus and excrescences of the rectum; preternatural contraction of the sphincter ani; ulcer on the inside of the rectum; stricture of the rectum; malignant diseases of the rectum; diseases of the maxillary antrum, and encysted tumors.

Two lectures are taken up with illustrations of some of the important circumstances connected with operations in surge-

ry, and they are lectures which will be read with great pleasure. The illustrations are numerous and apposite, furnished by the large experience of the author. He begins by referring to the fact, that, while the efficacy of our remedies in most cases of disease may be a question, in surgical operations the success or failure must be a matter of certainty. If a cure arise from an operation it is attributed to that, and that only; and if a false step be taken it is apparent to the bystanders, and brings reproach upon the surgeon. We remember well a case in point, where a surgeon of our acquaintance performed the operation of lithotomy, and when he had got into the bladder found no stone there. It is true he was able to refer to Dupuytren, as having been betrayed into a similar error; but this was not sufficient to avert from his own head the disgrace of such a blunder. The examples mentioned by our author in the subjoined quotation place the subject in a strong light:

"But an operation, while it may do good, may also be productive of evil. A man has a stone in the bladder; he is suffering torture; he has nothing but a frightful death to which he can look forward. As the least of two evils, he is content to submit to the operation of lithotomy: and, it may be, that in the brief space of three minutes he is placed in a situation of perfect comfort, and that in forty-eight hours you are able to declare with confidence that his life is perfectly safe. A man may have a disease of the knee-joint, with carious bone and abscesses; he may be worn out by pain, by perspirations, sleepless nights, and other symptoms of hectic fever. You amputate the limb; and even on that very night he may sleep soundly; there may be no more perspirations; and in a week he may be gaining flesh, and present the aspect of health. But then, on the other hand, there are other cases, in which the patient, after lithotomy, may die within forty-eight hours, although he might have lived—in misery, it is true—had he been let alone, for a year or longer. So, in the case of amputation for a diseased knee-joint, the patient, instead of recovering, may die in the course of a few days, and very much sooner than he would have done had not an operation been resorted to."

An accomplished operator, Sir Benjamin Brodie considers a man who looks well at all the consequences of an operation before he begins it, and then thinks only of the patient, and not of the figure he may be making with the bystanders.—Never, he says, "slur over a single case;" but before going about the operation consider well all the accidents that may occur. He also urges the propriety of communicating to the patient or his friends your estimate of the dangers attending the operation. And, very prudently, he cautions operators against the error of making light of trivial operations, remarking that fatal results have attended as trifling wounds as a bee sting or a leech bite.

Hemorrhage, the shock to the nervous system, erysipelatous, and other forms of inflammation, and tetanus are among the consequences to be dreaded after surgical operations, and all have often lead to fatal terminations. The judgment of the surgeon is evinced in foreseeing the danger of these occurrences, and taking steps to prevent them.

The subject of mortification is treated at great length, but we pass it over, together with a number of other topics, in order to give some account of the lecture devoted to the local nervous affections, which Sir Benjamin introduces with the following case:

"A middle aged lady, who had been exposed during a considerable period of time to the operation of causes of great mental anxiety, complained of a constant and severe pain, which she referred to a spot, about three or four inches in diameter, in the situation of the false ribs of the left side. Besides this she was subject to fits, apparently connected with hysteria, and was otherwise in a very impaired state of health. Under these circumstances she died, and on examining the body after death, particular attention was paid to the side to which the pain had been referred. No morbid appearances could be detected in it; there was neither inflammation, nor thickening, nor adhesion, nor any morbid change of structure, nor the slightest deviation of any kind from the natural condition of the part."

Upon which he remarks as follows:

"Now such a case as this is by no means uncommon. It is only one of many which might be adduced in proof of this proposition, namely, that the natural sensations of a part may be increased, diminished, or otherwise perverted, although no disease exists in it which our senses are able to detect either before or after death."

Often, however, there is a sufficient cause for these local nervous affections, as the subjoined instructive case will testify:

"A man was admitted into St. George's Hospital in the year 1808, complaining of a severe pain in the inside of his knee. The joint was carefully examined, but no marks of disease could be detected in it. In the thigh, however, there was an aneurism of the femoral artery, of the size of a small orange. This last disease had scarcely attracted the patient's notice. He said that he should be very well if it were not for the pain in the knee, and it was not until some trouble had been taken to explain to him the nature of his case, that he could be made to understand that the tumor was of any importance. Soon after the man's admission, Sir Evarard Home (then Mr. Home) applied a ligature round the femoral artery, in the upper part of the thigh. On the instant of the artery being secured the tumor ceased to pulsate, and the pain in the knee ceased also. Some untoward circumstances occurred, and the patient died about four or five days after the operation was performed. On inspecting the limb after death, the aneurism was found reduced to one-half of its former size; some branches of the anterior crural nerve, which passed over it, and which must have been kept on the stretch previous to the operation, were found to terminate in the part to which the pain had been referred, on the inside of the knee; and thus the cause of the pain was sufficiently explained. It was, in fact, a nervous pain, existing where there was no disease, in consequence of pressure on the nerves above."

Many analogous cases are recited in these lectures which will arrest the attention of the reader. Every practitioner

of experience must have met with cases similar to the following:

"A gentleman awoke in the middle of the night, laboring under a severe pain in one foot: at the same time that some other sensations to which he was not unaccustomed, indicated the existence of an unusual quantity of acid in the stomach. To relieve the latter he swallowed a large dose of an alkaline medicine. Immediately on the acid in the stomach having been thus neutralized, the pain in the foot left him.

"The late Dr. Wollaston was accustomed to relate the following history:—He ate some ice-cream after dinner, which his stomach seemed to be incapable of digesting. Sometime afterwards, when he had left the dinner-table to go to the drawing-room, he found himself lame from a violent pain in one ankle. Suddenly he became sick; the ice-cream was rejected from the stomach; and this was followed by an instantaneous relief of the pain in the foot."

The following case is instructive, impressing us, as it does, with the necessity of scrutinizing all anomalous symptoms that may occur—in other words, of exercising our reasoning faculties in the practice of our profession. It was by a rigid process of induction that the author arrived at the source of the evil in this case.

"A lady consulted me concerning a pain to which she had been for sometime subject, beginning in the left ankle, and extending along the instep towards the little toe, and also into the sole of the foot. The pain was described as being very severe. It was unattended by swelling or redness of the skin, but the foot was tender. She labored also under internal piles, which protruded when she was at the water-closet, at the same time that she lost from them sometimes a large and sometimes a smaller quantity of blood. On a more particular inquiry, I learned that she was free from pain in the foot in the morning; that the pain attacked her as soon as the first evacuation of the bowels had occasioned a protrusion of the piles; that it was especially induced by an evacuation of hard feces; and that if she passed a day without any evacuation at all the pain in the foot never troubled her. Having taken all these facts into consideration, I pre-

scribed her the daily use of a lavement of cold water; that she should take the Ward's paste (*confectio piperis composita*), three times daily, and some lenitive electuary at bed-time. After having persevered in this plan for the space of six weeks, she called on me again. The piles had now ceased to bleed, and in other respects gave her scarcely any inconvenience. The pain in the foot had entirely left her. She observed that in proportion as the symptoms produced by the piles had abated, the pain in the foot had abated also."

When we first read the lecture on fistula in ano two years ago we were so struck with the views of our author respecting the nature and origin of that disease, that we inserted the lecture in this Journal. It may be seen in the first volume of the new series. The lectures on disease of the hip-joint, that on the use of mercury in syphilis, and several others in this volume, might be profitably copied if we had the space at our disposal. It would not be easy to find in the same compass more useful matter than is embraced in each of these discourses, or indeed in this volume. We the less regret the limited extracts we have it in our power to make from it, because we feel sure that it will in a short time find its way into all the medical libraries in the country.

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ART. VIII.—*A Dictionary of Practical Medicine, comprising General Pathology, the Nature and Treatment of Diseases, Morbid Structures, &c.* By JAMES COPLAND, M.D., F.R.S. Edited, with additions, By CHARLES A. LEE, M.D. New York: Harper and Brothers, No. 82, Cliff street. 1845. 8vo. Parts I to XIII.

No medical production of the age has called forth from the medical press stronger expressions of admiration than the work of which the name is given above. It is regarded with a feeling of astonishment as the production of one man. The labor required for the preparation of a work of such extent must be immense; but it is not so much the amplitude of the task as the excellence of its execution, that has extorted such

general and warm applause. Where the field to be gone over was so broad it was hardly to be hoped that one mind could do justice to all the topics presented; and yet each article in the *Dictionary* is a monograph so perfect in itself that it would not be easy to improve upon it. Thirteen numbers of the Dictionary have now been issued, and seven more are expected to complete the work, which will be embodied in three large octavo volumes, with small print and double columns, and is offered to subscribers at a very reasonable price.

The value of a work like the above to the practitioner who must often be going back to the authorities in his profession, it would be difficult to exaggerate. Here, in a brief compass, compressed into three volumes, and alphabetically arranged, he has a compendium of medical science and practice, by a physician of profound learning and matured experience. The opinions it expresses are such as he may generally adopt; the practice such as the experience of a long life, laboriously spent among disease, sanctions; it exhibits medical science as it was the day the articles came from the author's pen; and by the ample references at the end of each article puts it in the power of the reader to prosecute his researches to any desired extent.

Dr. Lee, the American editor, is known to his countrymen as the laborious editor of several works, and we believe the truth of our remark will be concurred in by all, that he has touched no work which has not come from his hands enriched and improved. The office which Dr. Lee has assigned himself in his present undertaking, is to supply whatever may have been added to our progressive science since Dr. Copland sent his articles to the press, and especially to add what has been done in practical medicine by American physicians. Thus far he appears to us to have performed that office with impartiality and judgment. He has ransacked our medical literature, and nothing seems to have escaped him. Appended to Dr. Copland's "bibliography," will be found references by Dr. Lee to every medical journal extant in the Union,

and nearly every leading medical paper that has been written by his countrymen.

We need not insist upon the desirableness of such a Dictionary as this. Every practitioner who can spare the means will possess himself of it. Mr. James Maxwell, or Mr. F. W. Prescott, of this city, will receive and transmit orders for it, or for any other medical work published in this country. They keep always on hand an excellent stock of standard medical books.

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ART. IX.—*A Practical Treatise on the Diseases of Children.* By JAS. STEWART, M.D., A.M.; Fellow of the College of Physicians and Surgeons; one of the Consulting Physicians of the Northern Dispensary of the City of New York; Late Physician to the Orphan Asylum, &c. &c. Third edition, carefully revised and enlarged. New York: Harper & Brothers, 82 Cliff street. 1845. 8vo. pp. 544.

When a work has passed to the third edition, it may be supposed to have reached a point at which its author may be careless of criticism. The public has then set the broad seal of its approbation upon it, and it has passed beyond the reach of the press. This treatise of Dr. Stewart's is in that enviable position, and, as we should judge, without much of that laudation by which many a work has been brought into temporary favor. In this edition the Harpers have given us a fine specimen of their mechanical skill; they have issued the work in a very substantial and tasteful style, as if conscious that they were sending abroad a book that would be used. The paper and binding will bear to be handled, while its matter will instruct its readers in one of the most interesting branches of the healing art. The diseases of children—so rife, often so sudden in their incursion, and so rapid in their progress—with what force do they appeal to our sympathies! We rejoice at the appearance of every new work devoted to their special elucidation. We cannot be too sedulous in the study of their nature and cure.

This elaborate work is for sale at the bookstores of Mr. Maxwell and Mr. Prescott.

# SELECTIONS

FROM

# AMERICAN AND FOREIGN JOURNALS.

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*Report on the Progress of Forensic Medicine.*—By Wm. Augustus Guy, M.B., Cantab. Fellow of the Royal College of Physicians, Professor of Forensic Medicine, King's College, Physician to the King's College Hospital, &c.

TOXICOLOGY.

*Poisoning by Hydrocyanic Acid.*—The subject of poisoning by hydrocyanic acid holds the same place, in point of importance, as it did in the former report. No less than five cases have been recorded in the English journals during the last half of the year. Of four of these it is proposed to give a full account, adding such additional facts and observations as can be gleaned from the cases themselves, or from the commentaries which accompany them.

*Two Cases of Poisoning by Prussic Acid, by Mr. Nunneley, of Leeds.*—Two interesting, instructive, and minutely detailed cases of poisoning by this acid, were communicated to the Provincial Medical and Surgical Journal, by Thomas Nunneley, of Leeds. The particulars of the first case are condensed from the evidence given before the inquest held upon the body; those of the second case, which terminated favorably, chiefly the man's own account.

The leading particulars of the first case, as gleaned from Mr. Nunneley's communication, are as follows:

The deceased purchased of a druggist an ounce of prussic acid, labelled 'Scheele's strength,' but which was subsequent-

ly proved by careful analysis to contain only 1·5 per cent. Of this it would seem *probable*, that five drachms and a half were swallowed by the deceased, as the bottle when found on his person contained two and a half drachms. The circumstances under which the poison was swallowed are involved in some obscurity; but from a comparison of all the facts detailed in evidence, or observed by Mr. Nunneley himself, it is most probable that the deceased poured the poison into a tumbler which he found on the table of a room on the ground floor, swallowed it, rinsed the glass out, threw the water used for this purpose into and about a spittoon, replaced the stopper in the bottle, and put the bottle into his pocket, ran up stairs with the tumbler to a room on the floor above, placed the tumbler on a table, and then threw himself on the sofa at the end most remote from the part of the table on which he had set the glass. About three minutes from the time the deceased was heard to enter the lower room, he was found by one of the witnesses (Mr. Tennant) lying on his back on the sofa, but as soon as he heard him enter the room, 'he sprang up, and sat upon-an-end.' He did not speak, but appeared like a man who was suffering from an excess of drink. Mr. Tennant then left the room, and returned almost immediately, when he found the deceased sitting in the same position, with the exception that he was reclining on the right side, with his head on the sofa cushion. Mr. Tennant then said, 'You seem ill, sir,' when he made an attempt to speak, but was not intelligible. The witness then went close up to him, and said, 'You must excuse my interfering with you, but you seem very ill,' and then asked if he could be of any assistance to him, if he might fetch a doctor. The deceased in reply laid his hand on his breast, and said, 'Oh no, it is too late, it is too late.' These were the only words he uttered. Mr. Tennant then rang the bell for the landlady who attended the deceased, while Mr. Tennant ran for a medical man. In her evidence she stated, that she thought the deceased was in a fit, and accordingly loosed his handkerchief and collar, and bathed his head with brandy. In about five minutes from Mr. Tennant's leaving the room, and about a quarter of an hour from the time that the deceased was heard to enter the house, Mr. Nunneley arrived. He found the deceased still lying on the sofa, resting on his right side, unable to speak, and apparently unconscious, but the pulse was still beating slowly, but distinctly. On reaching the top of the stairs, near the door of the room, Mr. Nunneley thought he detected the smell of hydrocyanic acid,

but on going to the end of the room where the deceased was, he could not detect it in consequence of the strong odor of the brandy, which had been used to bathe the head of the deceased. Suspecting that the deceased had taken hydrocyanic acid, no time was lost in dashing cold water upon him, which 'decidedly roused him.' This remedy was repeated with effect several successive times; 'it roused him, and he took a deep inspiration.' Ammonia was also administered, and freely applied to his chest. A small quantity of a solution of chlorine was also given; and the feet and legs placed in a hot mustard bath. The deceased was conscious of the administration of the ammonia. In spite of these remedies, however, 'he gradually became stiller, and sank; his legs, arms, and chest were slightly convulsed, the upper extremities more than the lower, and the jaw was fixed; the eyes were prominent and staring, and the pupils widely dilated; but before death they became much less so; they were glassy. The countenance was puffed up and dark, rather purple. There was some foam about the mouth; he breathed slowly and convulsively, something like violent sobbing. The blood-vessels were injected, and the whole of the countenance bloated. The hands were partially contracted, the fingers rigid, and about the nails of a dark lead color.' The time which elapsed between the arrival of Mr. Nunneley and the death of the patient amounted to about half an hour; it therefore follows, that he survived the taking of the poison three-quarters of an hour.

The following is a short abstract of the post-mortem appearances presented by the body five hours and a half after death:

*External appearances.*—Body still warm; upper parts pallid, but all the depending portions livid. the cutaneous veins, especially those of the legs, filled with fluid blood; the limbs about as rigid as is usual at the same period after death; the fingers, at the root of the nails discolored; the countenance placid, but somewhat turgid; the eyelids closed; the eyes prominent and glassy; the pupils moderately dilated; the jaws contracted, and the lips closed. 'There was the odor of hydrocyanic acid in the room near the body. The degree, however, in which this could be perceived by those present, on applying in succession the nose to the nostrils of the deceased, differed materially; by Dr. P. Smith very strongly; by myself decidedly, but not what I should call strongly; and by the other two gentlemen, scarcely, if at all; indeed, they could not say they did perceive it.' Elsewhere, Mr.

Nunneley says, 'It (the odor) was perceptible to my nostrils even before the body was opened. It was so strong that I had an effect from it for some hours afterwards; that is, constriction about the pharynx.'

*Abdomen.*—On opening the peritoneum, the odor of hydrocyanic acid was instantly perceptible in any part of the room; but most distinctly close to the stomach. All the viscera healthy. No odor of the acid in the intestines; but a sour smell, with an exceedingly strong odor of the acid in the contents of the stomach. The stomach contained rather more than a pint of half digested matter (he had eaten a hearty breakfast about two hours and a half before taking the acid), and its mucous membrane exhibited the turgescence of the vessels usual during the process of digestion.

*Chest.*—Lungs healthy; large bronchial tubes filled with reddish frothy serum. Heart healthy, but completely distended on both sides with dark fluid blood.

*Head.*—Chronic inflammation of the arachnoid; serous effusion on the surface and into the ventricles; substance of the brain firm, perhaps rather more so than usual.

The *chemical analysis* was performed by Mr. West. The substances submitted to analysis were the contents of the stomach, the matters contained in about fifteen inches of the ileum, two ounces of blood from each side of the heart, and three drachms of serum from the brain.

*Contents of the Stomach.*—Strong acid reaction; marked odor of prussic acid; decided reaction with the silver and iron tests; four-tenths of a grain of pure hydrocyanic acid; equal to twenty-seven grains of medicinal acid of 1·5 per cent. (the strength of the acid in the bottle), were obtained from the contents. From experiments on the contents of the ileum, the blood and the serum of the brain, Mr. West states that he thought himself 'warranted in stating, the arterial blood, and the fluid from the brain, as well as the contents of the ileum, to contain a distinct, though very slight trace of hydrocyanic acid; the venous blood none.' This fact is inferred from the production of a film upon a drop of nitrate of silver inverted over the substances in question. The products of the distillation of the contents of the ileum precipitated nitrate of silver, but did not yield Prussian blue: the liquid distilled from the arterial blood and serum, neither affected the silver test, nor yielded Prussian blue. It is obvious therefore, that the presence of hydrocyanic acid in these fluids must be considered to be full as doubtful as the passage just quoted would make it. The parties present thought

that they perceived the odor of prussic acid in the serum from the ventricles of the brain; 'Mr. Nunneley with some hesitation, but still he thought he could perceive it; Dr. P. Smith perceived it so decidedly as to have no hesitation about it.'

Such is a careful abstract of this extremely interesting case. Some observations communicated by Mr. Nunneley to the succeeding number of the same journal, will be noticed in their proper place.

The second case of poisoning by this acid reported by Mr. Thomas Nunneley will be found in the Provincial Medical and Surgical Journal for August 13th, 1845. When Mr. Nunneley saw the patient the symptoms had passed away, but 'he was able to give a detailed and perfectly natural account of the whole transaction, and of his feelings at the time of becoming insensible. This he repeated the next day, and the different parts of it were so confirmed by different persons, that there cannot be any doubt of its accuracy.' The patient, a book-keeper in a large manufacturing establishment, 40 years of age, bought three-penny worth of prussic acid under the pretence of poisoning animals, and on going to bed at night undressed himself by the bedside, nearly filled a wine-glass with gin, emptied the bottle containing the hydrocyanic acid into the glass, corked the bottle, and placed it on the chimney-piece, drank off the contents of the glass, which he set down, then threw down the bed-clothes, got into bed, and covered himself up. He now said to his wife, 'Well, Bessy, I have taken something, and it will be all over with me in a few minutes.' She immediately jumped out of bed, and ran screaming to the door. When she left the bed, the child, who was frightened, crept to its father, and said to him, as he informed Mr. Nunneley, 'Father, don't leave me;' to which he replied, putting his arms around it, 'No, my dear, I won't leave you.' He now perceived his jaws becoming stiff, and crammed the sheet between his teeth, thinking, as he said, that he would like something to hold by: he felt his jaws becoming stiffer and tighter, which was all he was conscious of until the water was dashed in his face, when he raised himself, and to his surprise, found several persons round the bed. He had no idea how long he had been unconscious, and said that he felt no pain till the water was dashed upon his face; the sensation he then felt, he said, was most awful, he could not describe it. About two minutes

from the time the poison was taken the wife returned, and found her husband lying upon his back, insensible, breathing hard, the eyes wide open and staring, the face 'black red.' In about ten minutes from the swallowing of the poison Mr. Bishop reached the house, and found the man foaming at the mouth, the face rather pale, and covered with large drops of sweat, the arms rigid, the hands half extended, the jaws so firmly closed as to prevent him from giving an emetic of sulphate of zinc. Mr. Bishop immediately dashed cold water over the head and neck, when the man raised himself up and became sensible; ammonia was then rubbed over the hands, the smell of which he quickly perceived, and said he felt better for it, and the sulphate of zinc was administered; vomiting soon followed, the matter ejected smelling strongly of hydrocyanic acid. About a pint of blood was next taken from the arm, which had a muddy-red brick tint, and coagulated as usual. There was a difference of opinion as to the blood having an odor of prussic acid, but the poison could not be detected in it by chemical tests. The strength of the acid was found to be three and a quarter per cent. of real acid. The quantity of acid taken was estimated at 40 drops, so that the man must have taken nearly one grain and a half of anhydrous prussic acid. Twenty minims of the same preparation destroyed a small half-grown mongrel dog in two minutes and a half, and a full-sized terrier bitch in one minute.

A report of the same case by Mr. Edward Bishop, surgeon of Kirkstall, agreeing in all essential particulars with the foregoing, will be found in the Lancet for 20th of September, 1845.

*Two Cases of Poisoning by Hydrocyanic Acid, by Mr. Hicks, of Newington.*—Mr. James Hicks of Newington, has made an important addition to our knowledge of the effects of prussic acid, by the publication of two cases, accompanied by some judicious comments, in the pages of the Medical Gazette. The first case is an abridgement of one published in a former number of the Gazette; the second is related for the first time, from memory. The following are the leading particulars of the first case. A female, about 22 years of age, swallowed a draught containing, as ascertained by analysis, *nine-tenths* of a grain of pure anhydrous acid. It appears from the statement of the father, who was present when the medicine was taken, that, on swallowing it, the girl started up, threw her hands over her head, drew a deep gasp-

ing breath, stood for a second, and, then, running forward for a short distance with great violence, fell with her head first to the ground, after which she never moved, but continued to make a moaning noise for five minutes afterwards. On Mr. Hicks's arrival he found the girl lying on her back, perfectly insensible, with her teeth clenched, foam issuing from her mouth, and the face so greatly congested as to be almost purple; the breathing was slow, laborious, and at long intervals; the pulse imperceptible, and the action of the heart indistinct; the eyelids were partly closed, the eyes appearing as if pushed forward between them, the pupils fully dilated and insensible to light; the body was so strongly convulsed that the head seemed buried between the shoulders, and the arms were nearly turned round by the action of the pronator muscles. Mr. Hicks's first impression was, that the patient was laboring under some form of epilepsy; but having ascertained that the symptoms came on immediately after taking a dose of medicine, he was soon convinced, by the taste and smell of the liquid, that she had taken prussic acid. Ammonia was accordingly applied to the nostrils, the cold affusion to the head, and a fruitless attempt was made to administer some brandy and ammonia. In spite of this treatment 'the breathing became gradually slower, and at longer intervals, until it entirely ceased, death appearing to have been caused, in this instance, by the perfect inability of the patient to get air into the lungs by inspiration; the time that had elapsed between taking the poison and death being twenty minutes.

The body was examined ninety hours after death, and presented the following appearances. Externally it had much the appearance of that of a person who had died of asphyxia; the teeth were clenched, the mouth covered with foam, the face of a dusky red hue, and the whole of the depending parts of the body of a dark purple or violet color. The internal appearances were as follows:

*Head.*—The dura mater and sinuses much congested, the whole substance of the brain dotted with fluid black blood, the ventricles empty, and the plexus choroides pale and bloodless. No odor of prussic acid perceptible.

*Chest.*—Odor of prussic acid distinctly perceptible, far more so than in any other part of the body; lungs healthy, but much congested; the right ventricle of the heart loaded with blood; the aorta empty; the blood fluid and very black.

*Abdomen.*—Stomach containing about four ounces of fluid, smelling strongly of prussic acid; its lining membrane, with

the exception of a small red patch on the posterior part, near the cardiac orifice, healthy; the kidneys much congested, and of a dark pinkish hue; the rest of the viscera healthy.

The contents of the stomach were examined five days after death. The odor of prussic acid was still perceptible, and the poison was detected by the iron and silver test. It was ascertained that the quantity of the poison taken did not exceed *nine-tenths* of a grain of pure anhydrous acid, a quantity equivalent to 18 grains of Scheele's acid, or 45 of the pharmacopœial acid, the former of which contains five per cent., and the latter two per cent.

A report of this case, differing but little from that published in the Medical Gazette, was communicated by Mr. Hicks to the Lancet, and is followed by a short account of the same case drawn up by Mr. Watson and communicated by Dr. Letheby. The only discrepancies which it is necessary to point out are the following:

1. The prussic acid lotion, which was taken by mistake, contained, according to Mr. Hicks, three grains and a half of anhydrous acid; but according to Dr. Letheby's analysis, four grains. The fourth part, therefore, would contain, according to the first estimate, rather less than nine-tenths of a grain; and, according to the second, one grain.

2. Mr. Hicks states that death took place in twenty minutes; Dr. Letheby, on the authority of Mr. Watson, 'just fifteen minutes from the time of her taking the medicine.'

3. In addition to the statement that the odor of the prussic acid was distinctly perceptible, in the chest, we are told that 'this was still more marked in the fluid contained in the pericardium.'

4. The chief discrepancy, however, is to be found in the description of the stomach and its contents. Dr. Letheby says, 'the stomach contained two ounces of a thick whitish fluid, apparently composed of biscuit and water. Neither of the three gentlemen whom I have named (Messrs. Watson, Waterworth, and Hicks), could detect any odor of prussic acid; but it was evident to myself, even on the following day. On subjecting it, however, to a chemical analysis, I could but barely recognise the presence of this poison. The interior of the stomach presented those marks of ecchymosis which I have noticed and described in my three former cases.' The following facts are necessary to complete the case. The deceased did not speak after taking the poison. She was not sick; nor were the fæces or urine expelled.

The absence of the shriek or scream has been already noticed.

Mr. Hicks's second case is as follows: 'A girl having quarrelled with her lover, expressed a wish to leave the room, on account, as she stated, of feeling faint; but she had not done so more than a minute when she was observed to throw her hands over her head, and then fall to the ground; the breathing for a time was quite imperceptible, when, after making a few gasps for breath, she died five minutes after taking the poison, without having been in the least convulsed from the first. Within a short time after she died I arrived at the house; at this time the body was still warm, but, with the exception of a pallid state of the countenance, there was not an unnatural appearance to be seen about the corpse. It appears in this case that the girl took the poison as soon as she had left the room, and that she merely complained of feeling faint as an excuse for doing so. But the most interesting facts were, that, notwithstanding the dose was large, being an ounce of Scheele's, she had sufficient time to put the bottle into the front of her dress prior to volition being destroyed, while, at the same time, there were no convulsions, neither was there any scream, the girl falling down without making any noise whatever.'

*Case of Poisoning by Prussic Acid, by Dr. Guy.*—This case, of which the leading particulars are stated below, is interesting, first, by showing that a considerable interval of perfect consciousness, and complete command over the voluntary muscles, may intervene between the swallowing of a large dose of the acid and the development of its characteristic effects; and, secondly, as an instance of attempted suicide, in which the impulse to the commission of the act preceded the act itself by a very short interval of time.

There are some few facts of importance established by the foregoing cases which deserve to be briefly considered. This will be best done under distinct heads.

Symptoms.—*The Shriek.*—The preceding cases give no confirmation to the importance attached to the shriek as a symptom of poisoning by prussic acid. In Mr. Nunneley's fatal case no shriek was heard, and it is highly improbable from the facts detailed in evidence that any could have been uttered. The shriek was also absent in Mr. Nunneley's second case, in both the cases reported by Mr. Hicks, and in

Dr. Guy's case. It is very difficult, therefore, to understand whence the strong impression which has existed as to the importance of this symptom could have arisen. It is certainly not from observation in the human subject, unless indeed the exclamations uttered in one or two reported cases, or the loud gasping inspirations observed in other instances, have been confounded with a scream or shriek; so far from the shriek being a common symptom, Mr. Hicks says, 'Although I have read over every case published in the different works on poison and medical jurisprudence, I have not found a single instance where a shriek has been mentioned as occurring prior to death.' In animals, moreover, the shriek, though of more frequent occurrence than in the human subject, is by no means a constant symptom. Even when, as in the case of Mrs. Belaney, a shriek is reported to have been uttered, it is by no means satisfactorily made out that the scream or shriek was a symptom of poisoning by prussic acid. It is fully as reasonable to suppose that in her case it was a simple expression of alarm on finding that she had swallowed some of 'that hot drink,' of the fatal properties of which she was probably not ignorant. In the case of Sarah Hart, the noise which alarmed her neighbor was not a shriek, but 'a moan or stifled groan,'—probably the loud gasping inspiration which was so marked a symptom in Dr. Guy's case.

*Acts of Volition.*—The foregoing cases form a very useful addition to our information on this subject. In Mr. Hicks's second case the girl threw her hands over her head, fell to the ground, and after a few gasping respirations died in five minutes. The only act of volition consisted in placing the bottle in the front part of her dress. His first case was marked by strong muscular contractions but by no act of volition. The girl started up, threw her hands over her head, drew a deep gasping breath, stood for a second, and then, running forward for a short distance with great violence, fell with her head first to the ground, after which she never moved, but continued to make a murmuring noise for five minutes afterwards. She died at the end of twenty minutes. The other three cases were characterized by the performance of several acts of volition. After a dose of prussic acid which under less favorable circumstances would probably have proved rapidly fatal, the young lad, whose case is recorded by Dr. Guy, after swallowing the poison got out of bed, walked round the foot of the bed to a chest of drawers at some little distance from it, placed the stopper very firmly in the bottle, laid it on the drawers, walked back to bed, sat on

the side of it, and then for the first time lost all consciousness. Mr. Nunneley's cases are still more remarkable, as the patients not only moved about, but spoke and answered questions after taking the one a fatal, the other a large, dose of prussic acid. The two cases were among the most remarkable and instructive yet recorded. For the several acts of volition performed, the reader is referred to the cases themselves. The fact, that both patients enjoyed the use of speech for some little time after taking the poison, is well worthy of remark. The subject of the first case answered a question addressed to him some minutes after he had swallowed the poison, and the man who recovered retained the use of his speech till the jaws gradually closed. If these facts had been known to the profession before the trial of Belaney, the medical witnesses would not have expressed themselves in such decided terms as to the improbability of voluntary motion or speech after the utterance of the shriek, especially if they had formed the very feasible opinion just expressed, that the shriek might not, after all, have been a symptom of the poisoning, but merely an expression of terror uttered during the interval of perfect consciousness and self-command which so often follows immediately on the swallowing of the poison.

*Duration.*—In Mr. Nunneley's first case, the duration, as far as it could be ascertained, was three-quarters of an hour; in Mr. Hicks's first case fifteen or twenty minutes, in his second case five minutes.

*Dose in Fatal Cases. Smallest Fatal Dose.*—In Mr. Nunneley's fatal case, the quantity could not be ascertained. It is probable, however, that it amounted to four drachms and a half of acid containing one and a half per cent. of pure anhydrous acid. One ounce had been purchased, and the bottle when found contained two drachms and a half. At any rate, this case throws no light on the question of the smallest dose which may prove fatal. In Mr. Hicks's first case the fatal dose did not exceed *nine-tenths* of a grain of anhydrous acid, or, according to Doctor Letheby's analysis, one grain.

*Quantity taken in Cases of Recovery.*—In Mr. Nunneley's second case, the quantity of anhydrous acid taken was estimated by Mr. West at one grain and a half. In Dr. Guy's case, neither the quantity nor the strength of the preparation could be ascertained.

Treatment. *Cold Affusion.*—'Of all the remedies I am acquainted with,' says Mr. Nunneley, 'I should be disposed to place most reliance upon cold affusion. In this instance (the fatal case) more effect was produced by the dashing of cold water than by any other means.' By way of illustration of the value of this remedy, Mr. Nunneley gives the following: 'Some years ago I well recollect taking a large Newfoundland dog to the side of a pond, and giving him upwards of a drachm of hydrocyanic acid, originally of Scheele's strength, but having been kept some time, it had probably lost something of its strength, yet, I am convinced, was sufficiently potent to destroy life. He almost immediately began to stagger, when two of us seized him by the legs, and threw him into the water, in which he swam about for a time, and presently came out, not much the worse for the dose.

*Tests.*—Mr. Nunneley, in citing Mr. West's analysis of the contents of the stomach in the fatal case reported by him, impugns the accuracy of the statement made in toxicological works, that the cyanide of silver is insoluble in cold, though soluble in boiling nitric acid. Dr. West says, 'I applied the acid, cold, to the washed precipitate, and found it to dissolve without heat. I formed a fresh portion of cyanide from some of Scheele's acid; this also dissolved in cold nitric acid. It appears, therefore, that the supposed insolubility is at most a matter of proportion, and should not be described as a characteristic of the cyanide.' Mr. Nunneley corroborates this statement. 'I have tried the effect of nitric acid upon cyanide of silver, made with hydrocyanic acid of different strengths, as well as nitrate of silver solutions of different strengths, and I am satisfied that it is, as stated, only a question of proportion. If the precipitate is not very copious, and occasioned by only weak solutions of the acid and salts, then cold nitric acid dissolves it, even if the acid be not of the strongest; but, on the contrary, if the precipitated cyanide be abundant, in large flakes, and made from stronger solutions of the nitrate of silver and hydrocyanic acid, then concentrated boiling nitric acid is required for its solution.' [This statement is correct, and as it affects the value of a very delicate test, on which much reliance is placed, it is not unimportant.]

Mr. Hicks has tested the relative delicacy of the iron and silver tests, and of the odor of the acid. When the tests were added to the solution of the acid the limit in the case of

the iron test was 1 minim of prussic acid to ℥iv distilled water: in the case of the silver test, 1 minim to ℥xvj, with which quantity a milkiness was obtained. There was a faint color when the proportion was 1 minim to ℥iv, and a doubtful result with ℥viij and ℥xvj. When watch-glasses moistened with caustic potash and a solution of nitrate of silver respectively, were held over the solution of hydrocyanic acid, sulphate of iron and muriatic acid being subsequently added to the liq. potassæ, the iron test gave 'traces' of its characteristic action with 1 minim in ℥viij, and the silver test a film with as high a degree of dilutation as 1 minim in ℥xxxij. It would, therefore, appear that the modification of the iron and silver tests proposed by Mr. Taylor, possesses, as might be anticipated, greater delicacy than the same tests added to a solution of the acid. Mr. Hicks has also instituted some experiments, with a view of determining the value of this modification of the iron and silver tests as applied immediately, and without previous distillation, to the human body or to the contents of the stomach.

The following is a short summary of Mr. Hicks's experiments:

1. The stomach of a dog, which had been killed by three drachms of prussic acid, after being well washed and allowed to remain sometime in water, was placed in a wide-mouthed bottle, over which a watch-glass, moistened with nitrate of silver, was placed. In ten minutes a white film of the cyanide of silver was deposited on the glass.

2. A cat was killed by 20 minims of Scheele's acid poured into the mouth. Eight hours after death, a small aperture was made in the parietes of the chest, and a watch-glass accurately fitted over it. In half an hour a white margin was formed, and, in an hour, the whole portion wetted with the nitrate of silver was covered with a distinct film of the cyanide, perfectly insoluble in cold nitric acid, but soluble in the acid when boiled. The iron test subsequently applied, gave no indication of the presence of prussic acid. The whole contents of the chest, the stomach, and the lower part of the mouth, were then placed in a bottle, and, on the glasses being applied accurately, the presence of the acid was indicated by both tests. But, on submitting the same to distillation, it could not be detected in the distilled liquor, either by the odor, or by the iron and silver tests.

3. The third experiment consisted in pouring into the stomach of a man, who had recently died, half a pint of por-

ter mixed with half a drachm of Scheele's acid, containing 4 per cent. or 1·12 grains of anhydrous acid. It was laid in a cool place, and examined two days after. The liquid, which had a *beery* smell, but no odor of prussic acid, was put into two bottles, over the mouths of which strips of glass moistened with liq. potassæ and solution of nitrate of silver, were placed. In less than ten minutes, most decided proofs were obtained of the presence of the acid, by the formation of white cyanide of silver in the one and Prussian blue in the other, on the subsequent addition of ferri sulphas and muriatic acid.

*Odor.*—Mr. West, who performed the analysis of the contents of the stomach, and the other fluids taken from the body, in the fatal case recorded by Mr. Nunneley, says, 'I have distilled a portion of the contents of the stomach, at this time, twenty-three days after the poison had been taken, and find the smell, the precipitate with nitrate of silver, and the Prussian blue precipitate. All these are produced, apparently, in the same degree as at first. This case is, therefore, opposed to the common notion of rapid decomposition of the acid.'

Mr. Hicks, in the course of his comments on the first case reported in the Medical Gazette (New Series, No. 14), draws attention to the fact that the odor of the poison was more distinctly perceived on opening the chest than even in the abdomen, and he corroborates this statement by experiments on animals. 'In many instances,' he says, 'where I have destroyed rats, the quantity has not exceeded four minims of Scheele's acid; still, on opening the chest immediately after death, as soon as all the signs of life had disappeared, the odor has been distinctly recognized in that cavity, even when not at all presented in the stomach.'

Experiments on Animals.—The following observations form part of Mr. Nunneley's commentary on the case reported by him in the Provincial Medical and Surgical Journal: 'Out of the great number of dogs, cats, and rabbits, which I have destroyed by the acid, I believe the majority did not shriek.—In some the effect is almost instantaneous,—a few violent struggles, followed by a rest; then a struggle and cry; an involuntary passing of the urine or fæces, and death,—the heart pulsating for sometime after. All other appearances of life have gone, the creature scarcely having moved from the spot. At other times I have seen a dog run about staggering for a minute or more, making attempts to howl, but

without succeeding. On the whole, I cannot but think that the instantaneous effects of hydrocyanic acid have been exaggerated, and that the quantity necessary to procure death has been somewhat under-estimated. But different animals will be very differently affected. Thus. birds die almost instaneously. It is sufficient to put the beak of a small bird (a sparrow) into the mouth of a bottle containing only a very small portion of the acid, and the vapor will, in a few seconds, quietly, as though paralysed, without convulsions, destroy it. Mice are very susceptible of its action; rabbits are much more so than either dogs or cats. On the other hand, cold blooded animals are almost proof against its influence. I have given it to frogs without producing much effect.'

Mr. Hicks states, *inter alia*, that in experiments on dogs and cats he has never known a longer period than forty seconds to elapse before the effects of the poison became visible; and that he has not met with a single instance of death taking place without being preceded by convulsions. He also confirms the statement made by Mr. Blake, that the effects of the acid are not so prompt when it is introduced directly into the stomach, as when its vapor has access to the lungs.

Some useful comments on recent cases of poisoning by prussic acid, on the tests for the poison, and on the treatment, will be found in the Monthly Journal of Medical Science. Much stress is there laid on the value of bleeding from the jugular vein, as a remedial agent, and the practice is enforced by a long quotation from Dr. Lonsdale's treatise.

*Poisoning by Bitter Almonds.*—Dr. Letheby reports the following case, which is given with slight abbreviations. A boy, 13 years of age, was left in charge of his father's shop. He was seen well and cheerful at half past 3 o'clock in the afternoon, but a little before 4, his sister, a child ten years old, found him lying on the floor. She immediately called the father, who found him stretched along the floor upon his back, perfectly motionless and insensible; his face deadly pale; his eyes open and rolling from side to side, and panting for breath. His father raised him into a sitting posture, and then noticed that his limbs, though quite supple, were powerless. In five minutes he was seen by Mr. Henry, a surgeon, who found him still insensible, his countenance placid, but very pale, his eyes half open, fixed, and the pupils dilated, and the lid did not move when the eye was touched. He was breath-

ing slowly, deeply, and at intervals of a minute or so. The pulse at the wrist was gone, though the heart was still beating feebly. Cold water was dashed over the head and face, and an ineffectual attempt was made to administer stimuli by the mouth. About four or five minutes after his arrival the child died, and it is presumed that this must have been about a quarter of an hour from the time of his swallowing the poison. *Post-mortem* examination twenty-four hours after death. Face, placid but pale; eyes, half open; foam at the mouth, having the odor of bitter almonds. The depending parts of the body livid; the lungs congested; the right side of the heart gorged with dark fluid blood; the odor of the poison perceptible in the abdomen, but not elsewhere. The stomach contained twelve ounces and a half of a pulpy, semi-fluid matter, in process of digestion, and having a strong odor of bitter almonds. The internal coat of the stomach, with the exception of some red petechial patches along the greater curvature, was pale. On distilling the contents, with nitrate of silver, one grain of cyanide of silver was obtained, indicating about two-tenths of a grain of pure hydrocyanic acid. On further distillation the volatile oil of the bitter almonds was obtained, free from prussic acid. The points of medical interest in the case were the absence of convulsions; the fact that the boy did not speak after he was seen, that there was no scream, and no evacuation of the stomach, bladder, or rectum. He appeared to die from paralysis of the respiratory muscles, the breathing becoming slower and slower.

Dr. Letheby adds the following summary of the symptoms of poisoning by this agent. 'Those symptoms which appear to be most constant in the case of poisoning by bitter almonds or cherry laurel, are a cadaverous or mortal paleness of the face and body, together with great coolness of the extremities; an almost imperceptible pulse, a slow or panting respiration, and, in the generality of cases, there are no convulsions, but a paralysis, first of the voluntary muscles, and then of the involuntary; after this a profound coma supervenes, and then death. Upon a post-mortem examination, we find nearly the same appearances which hydrocyanic acid produces. The face and highest parts of the body are generally pale, the dependent livid, the countenance is generally placid, the eye half open, glassy, and prominent, the pupil dilated; foam may be adherent to the mouth, and it will smell of the poison; the lungs are greatly congested; the right side of the heart, and the venæ cavæ, gorged with

black, uncoagulated blood; the cavities generally have a strong odor of the bitter almond. The stomach may or may not be empty; its contents will always, if recently opened, give out a powerful smell of the oil; the inner coat is generally pale, excepting in one or two places, where there will be a blush of red (I have seen this in three cases of poisoning by oil of bitter almonds), and, altogether, there will be less doubt of the action of the poison than in a case of poisoning by prussic acid, for a greater evidence will be furnished by the odor, which is sure to be present in the stomach.'

*Poisoning by Acetate of Morphia.*—An apothecary's assistant, 24 years of age, swallowed, at noon, fifty-five grains of acetate of morphia, in two ounces of gum water. He then forwarded a letter to his master, informing him of what he had done. The master arrived in half an hour, and gave him, with some difficulty, and without effect, two grains of tartar emetic in an ounce of water, followed by two tablespoonfuls of olive oil. Up to this time the only symptom present was slight giddiness, which soon disappeared, and the lad went for a walk with one of his companions, entered a café, and drank half a bottle of beer. At the end of an hour and a half the lad complained of slight giddiness, a sensation of weight in the limbs, and a slight tendency to sleep. After two hours he was taken to the hospital, put to bed, and made to swallow three grains of tartar emetic, and twenty-four grains of ipecacuanha, in two doses, at an interval of half an hour. Though the operation of the emetics was assisted by tickling the throat, vomiting did not occur, and an œsophagus tube was introduced without effect. At the end of two hours and a half the face, which was previously pale assumed a violet hue; the eyes were injected, and turned upwards and outwards; a viscid perspiration broke out on the skin; the hands and legs grew cold and livid; the lad answered questions only by monosyllables; fell by degrees into a profound sleep; the head fell forward on the chest; the eyelids closed; and the body when left to itself, fell on the side; the legs bent under him;—in a word, he was in the condition of a drunken man. The breathing in the meantime was natural. A pound of blood being taken from the arm, the patient rallied slightly, and complained of not being able to swallow. The pulse, which up to this time was soft and somewhat frequent, became full, hard, and slow,

and there was a troublesome itching on the forehead, nose, and lips. This symptom, which began at the end of an hour, was at its height in two hours, and after four hours existed only at long intervals. The treatment now consisted of ammoniacal frictions to the belly and extremities, moxas to the legs, and repeated shaking of the body; but all in vain. The face was distorted; the eyes dull and sunken, and drawn upwards and outwards; and the entire surface of the body was icy cold. At the end of three hours a drachm of tincture of iodine, and the same quantity of hydriodate of potash, in three ounces of water, was given in two doses, at an interval of a quarter of an hour. Immediately after the second dose, the patient rejected what he had taken, but he slept while he was vomiting. Strong coffee was then given every five minutes, which was followed each time by vomiting. Four hours—The coma is still more strongly marked, and the patient can only be kept roused by pinching, tickling and shaking him strongly. He can be made to speak, but will leave a word half uttered. He was again bled to the same extent as before, with the effect of lessening the coma. Four hours and a half—Face violet; the members contracted and stiffened; he is speechless, and cannot be made to open his eyes. Friction of caustic ammonia to the epigastrium, and a blister to each limb. At the end of five hours a third bleeding was performed; strong coffee was still administered, and two blisters were applied to the shoulders. Five hours and a half—From this time the patient began to improve; opened his eyes, though with great difficulty; regained the use of his speech, and endeavored to explain his state to the bystanders. At the end of six hours he recognized the reporter, asked him how he did, inquired whether he did not think him very ill, and expressed surprise that he had survived fifty-five grains of acetate of morphia. At the end of seven hours the symptoms were slowly improving; he could struggle successfully against his tendency to sleep; his ideas were clear; and he could see, as he said, all that was passing, as if through a cloud. At eight o'clock the next morning, sixteen hours after taking the poison, the report was that he had vomited repeatedly during the night, and still continued to do so. On his forehead there was seen a vesicular eruption, which accounted for the itching of the previous day. He still complained of heaviness of the head, and confusion of intellect. On the following day he was nearly well, and left the hospital on the morrow. He still continued to complain of eructations, having the intense bitter taste of the

morphia. M. Bonjean regrets that he did not administer a solution of tannin, according to the suggestion of Orfila; and he adduces an experiment to show that the acetate of morphia is completely decomposed by that agent.

*Poisoning by Poppy-heads.*—The Gazette des Hôpitaux (April 15, 1845) quotes from the Echo de la Frontière, published at Valenciennes, the following cases. Three children of one of the faubourgs of Cambrai sucked some unripe poppy-heads, and soon after, on going home, fell asleep. In the middle of the night the mother was roused from sleep by the unusual sound of their respiration, which consisted of a short laborious râle. At the same time, the eyes were found wide open, the countenance pale and haggard, and the body convulsed. A medical man was immediately sent for, who succeeded in saving two of the children. Fruitless efforts were made to introduce an emetic into the stomach of the youngest; deglutition was arrested, the infant foamed at the mouth, and expired four hours after.

*Poisoning by Hemlock* (conium maculatum).—The children of one Duncan Gow, a tailor, of Edinburgh, found what they took for parsley, growing under Sir Walter Scott's monument, and took it home to their father, who, having fasted the whole day, greedily ate the vegetables, with a piece of bread. The quantity taken could not be ascertained, but it probably amounted to several ounces. The history of this case, from the time of the fatal meal, is carefully compiled from the evidence of the several parties who subsequently saw Duncan Gow. The first effect was loss of power in the inferior extremities, unattended by pain. This showed itself soon after the meal. 'His gait, which at that time was faltering, afterwards became vacillating—he staggered as one drunk; at length his limbs refused to support him, and he fell. On being raised, his legs dragged after him; and, lastly, when the arms were lifted, they fell like inert masses, and remained immovable. Perfect paralysis of the inferior extremities was ascertained to exist one hour and a half after the poison was taken, and that of the arms half an hour later.' The complete paralysis of the legs was accompanied by amaurosis; the excito-motory functions were also inferred to be paralysed, from the fact that tickling the armpits failed to produce any movement of the upper extremities. He lost the power of deglutition, and made ineffectual efforts to vomit. 'There were no convulsions, only slight occasional movement of the

left leg; and, lastly, both inferior extremities were slowly drawn upwards when placed over the iron of the stretcher. Three hours after taking the poison, the respiratory movements had ceased; the pupils were fixed. At this time the heart's action was very feeble, and ceased altogether ten minutes afterwards. The intelligence remained perfect nearly to the last; two hours after taking the poison he still retained the use of his speech, and a quarter of an hour after that still appeared sensible, though he could not articulate. The post-mortem appearances were, an unusual quantity of fluid blood in the vessels of the scalp, and in the sinuses of the brain; slight serous effusion beneath the arachnoid membrane, and into the ventricles; and numerous bloody points in the substance of the brain. The lungs were 'throughout intensely engorged with dark-red fluid blood. There were a few small clots of blood in the heart. The blood throughout the body, was of a dark color and fluid, even in the heart and large vessels. The stomach contained a pultaceous mass, formed of some raw green vegetable resembling parsley. Its contents weighed eleven ounces, and had an acid and slightly spirituous odor. The mucous coat was much congested, especially at its cardiac extremity. Here there were numerous extravasations of dark red blood, below the epithelium, over a space about the size of the hand.' The intestines and other viscera were healthy, but partially congested. On examining the contents of the stomach more minutely, it was found to consist chiefly of fragments of green leaves and leaf-stalks, and on a specimen being submitted to Dr. Christison, he recognised the *laciniæ* of the *conium maculatum*, or common hemlock. On bruising some of the leaves in a mortar, with a solution of potash, the peculiar mousy odor of conia was at once evident. The conium maculatum was also found growing on the spot from which the leaves had been gathered. Dr. John Hughes Bennet, the reporter of this case, accompanies it by some judicious comments, and shows the striking analogy of the symptoms to those recorded as having followed the drinking of the *Koneion* by Socrates; and justly observes, that that analogy is strongly in favor of the opinion of the identity of the poison swallowed by Socrates and the conium maculatum.

*Poisoning by Arsenic.*—The trial of James M'Kerlie, before the circuit court of Judiciary, at Glasgow, in April, 1845, as reported in the London and Edinburgh Monthly Journal, for June, 1845, comprises some points worthy of notice.

Three persons, a father, his son, and a shopman, partook of the same dish (kail), and some was also given to a dog.—They were all affected more or less severely, but, after frequent vomiting, recovered. The occurrence of vomiting in the dog first excited suspicion as to the cause of the illness being in the food. Dr. Paton, who was first called in, stated that he had tasted the broth, and that it had an acrid, pungent taste, and a powerful effect upon the teeth, from which he concluded that there was arsenic in it. This statement, so much at variance with the experiments of Dr. Christison, deserves to be put on record, though it must be admitted to be quite possible that the acrid, pungent taste might be due to some other substance contained in the broth, and used as seasoning. Arsenic was found in the broth by all the approved tests, and the results communicated in an excellently worded report, drawn up by Drs. Penny and King, of the Andersonian University. James M'Kerlie was proved to have purchased arsenic, under the usual pretence of poisoning rats, and to have been in the kitchen during the cooking of the broth. These, with other suspicious circumstances, induced the jury to find a verdict of guilty, and the prisoner was sentenced to transportation for life.

An interesting and instructive case of triple poisoning by arsenic is recorded by Dr. Bayard. The author's principal object in publishing these cases was to show the care which ought to be taken in medico-legal researches, and the little attention which ought to be paid to mere popular rumors. All the circumstances of the case, and the opinion of the medical men, who saw the deceased during life, were strongly opposed to the idea of poisoning; and it was not till the fifth member of the same family died in the short space of two years, that any suspicions of foul play were expressed. The bodies were then ordered to be examined, when, in three out of five, arsenic was discovered.

*Poisoning by Mercury.* Protochloride of tin as an antidote for corrosive sublimate.—M. Poumet, of Orleans, has examined the value of protochloride of tin as an antidote for corrosive sublimate, by means of a series of well-conducted experiments, and he arrives at the following conclusions:

1. Dogs which are made to take a solution of corrosive sublimate containing 15½ grains, 7¾ grains, or 1½ grains of the poison, die, even though allowed to vomit freely.

2. Dogs which are made to take 31 grains of the proto-

chloride of tin in solution recover readily and promptly, even when they are prevented from vomiting.

3. The black precipitate, and the supernatant liquid, the results of the mixture of the salts of tin with a solution of corrosive sublimate, are not poisonous.

4. A solution of the salts of tin, of twice the strength of the solution of corrosive sublimate, when introduced into the stomach, directly after swallowing the poison, neutralizes, instantly and completely, the deleterious property of the salt of mercury, even when the animal is prevented from vomiting.

5. This favorable result takes place, in one-fourth of the cases, when the antidote, instead of being administered immediately, is given a quarter of an hour after taking the poison.

6. The protochloride of tin, then, is an antidote to corrosive sublimate.

7. Would it not be exactly the same with the sulphate and nitrate of mercury? M. Poumet states, that he has reason to answer this question in the affirmative.

In the case of the corrosive poisons, the best antidotes are those which can be most promptly obtained, and as it is much more probable that white of eggs would be at hand in a case of poisoning by corrosive sublimate, than a comparatively rarer agent, the protochloride of tin, it is not likely that this latter substance, though doubtless an antidote to corrosive sublimate, will ever come into use.

*Poisoning by Corrosive Sublimate externally applied.*—John Welch, a druggist, was tried at Worcester, June 18, before Lord Denman, for causing the deaths of two children by a lotion containing corrosive sublimate applied externally for the cure of ringworm. The lotion was applied to the heads of three children. It caused pain, followed by violent inflammation, vesication of the forehead, uneasiness and fever, pain in the head and bowels, and sickness. These symptoms were followed in one of the fatal cases by profuse salivation, ending in sloughing of the gums and tongue. The jury returned a verdict of not guilty, and thus held out an encouragement, scarcely required to unlicensed persons to exercise an art which no previous training has prepared them to understand. No evidence was given as to the death of the other child. The nature of the poison was strongly inferred, but was not proved by analysis.

A case of poisoning by corrosive sublimate, mixed by mis-

take with sulphate of potass, is related by M. Jean-Baptiste Chevallier. The poisonous mixture was administered by a quack midwife, who was tried before the Tribunal de Premiere Instance de la Seine, for the illegal exercise of pharmacy and the profession of medicine, and involuntary homicide by imprudence. The nature of the mixture was ascertained by chemical analysis.

*Poisoning by Copper.*—The existence of a copper colic in men who work with metal is a subject upon which some doubt has been expressed, its symptoms being attributed to the lead with which it is combined. M. Blondet, in a memoir read before the Academy of Sciences. asserts the reality of the poisonous effects attributed to copper, and describes the colic which it occasions as being subject to remission, characterized by severe pain, increased by pressure, and accompanied by headache, nausea, and diarrhœa, or constipation. The vomited matters are bilious, and the first alvine evacuations are often of a green color. Fever is a somewhat rare accompaniment. In men who are not cleanly, the hair is green; the perspiration of the same color; and the teeth are covered by a grey coating of sulphuret of copper. The prophylactic measures proposed by M. Blondet are the habitual employment of an albuminous drink, and saline purgatives when the bowels are costive. Cleanliness, though not mentioned, is an obvious item of the prophylaxis.

*Poisoning by Zinc.*—M. Blondet, in a memoir presented to the French Academy of Science, directs attention to the symptoms brought on by the fumes arising from zinc used in bronze and brass founding. Heavy pain in the stomach, nausea, loss of appetite, cough, oppression, fixed pain in the head and a sense of tightness across the temples, noise in the ears, which continues during the night, general debility, tetanic stiffness and soreness of the limbs, rigors, trembling of some hours continuance, nightmare, a sensation of swelling, cold sweats preceded by flushes of heat. These symptoms disappear on awaking from sleep, but lassitude and soreness still continue.

*Poisoning by Sulphuric Acid.*—A case of poisoning by sulphuric acid, is reported by MM. Chevallier and Ollivier, which is chiefly interesting from the circumstance of the nature of the poison having been ascertained by an analysis of

the clothes, after an examination of some of the vomited matters and of the contents of the stomach had failed—a failure attributed to the free discharge of the poison by vomiting. The post-mortem appearances were very characteristic, and such as to render unnecessary the application of the tests for prussic acid, arsenic, and corrosive sublimate, which the reporters thought it necessary to use.

*Poisoning by Savin.*—An extremely interesting and instructive case of poisoning by this substance, administered to a pregnant female, with fatal effect both to mother and child, occurred in the month of May last, and was the subject of examination in the coroner's court before Mr. Wakley. The poison was identified by the aid of the microscope, the green substance found in the stomach being compared with a portion of powdered savin. Mr. C. Johnson, lecturer on botany at Guy's hospital, stated that on examining a portion of the powder under the microscope, he was enabled to determine it to be the part of a leaf of a plant of the pine genus, by the peculiar arrangement of the glandular apparatus of the leaf, and further, that it was savin by the exact correspondence of the glandular apparatus in question with that of a portion of savin powder examined at the same time. There was the same correspondence between the shape of the extremity of the leaf of the substance found in the stomach and a fragment of savin. The shape of the leaf was widely different from that of the yew, a poisonous plant belonging to the order coniferæ. The contents of the stomach were further identified by their odor. Mr. Alfred Taylor calculated the quantity of savin contained in the stomach at from 25 to 30 grains. The deceased had vomited freely, and brought up a large quantity of green matter which the medical attendant took for bile. The absence of other poisons, whether mineral or vegetable, was ascertained by Mr. Taylor. The jury returned a verdict 'that the deceased, Caroline Hillman, died from the effects of a certain poison called savin, but whether taken for the purpose of destroying life, or procuring abortion, there is not sufficient evidence to show, and that her male infant died a natural death.'

*Poisoning by Sulphate of Quinine.*—M. Desiderio communicated to the February sitting of the Royal Academy of Medicine, the results which he had obtained relatively to the action of this substance, by means of numerous experiments on animals as well as by observations at the bed-side. The

effects upon animals are in every respect similar to those observed in the human subject; namely: drowsiness, an indisposition to motion, unsteadiness of gait, dimness of vision, and drooping of the eyelids. An alcoholic solution of morphia produces analogous effects. Hence, when given with sulphate of quinine it increases its action. On the contrary, laurel water counteracts to a certain extent its effects, and may be considered as an antidote. Bleeding is still more efficacious, and digitalis also has appeared to be useful.

*Poisoning by bad Meat acting on vessels of Copper.*—On the 15th April, 1845, the patients, Sisters of Charity, and officials of the Beaujon Hospital, were suddenly, and nearly simultaneously, seized a few hours after dinner with violent colic, frequent and copious purging of bloody mucus, and painful tenesmus. In many instances the symptoms were extremely severe, and they were obviously due to poison. Soups, vegetables, and meat, and the evacuations of the patients, were accordingly submitted to chemical examination, and were found to contain copper. The mere discovery of this poison, however, was not sufficient; for it appeared that many patients who had partaken of the same food escaped, and the meat was forthwith suspected. One of the sisters, the superintendent of the kitchen, recollected that two kinds of meat had been used—a shoulder and a leg of beef—and that those only who had partaken of the latter suffered. Some of the leg still remained; it was cooked, and again eaten; the same symptoms ensued, and the sister nearly lost her life. Nothing of the kind occurred with the shoulder. It was, therefore, evident that the leg was unsound. It appears that on the day of the accident, the contractor had sent to the hospital a quantity of meat, the cellular tissue of which was infected, and evidently diseased; it was accordingly rejected by the superintendent. The contractor immediately killed an ox, which was reported to have just come off a long journey, and consequently in that febrile state which the butchers technically call *heated;* and the portion of it brought to the hospital still reeking, was also rejected. He then appealed to the central administration, which, without previous inquiry, ordered it to be accepted. This was the cause of the symptoms, the presence of copper being thus explained: Meat of this nature generates a quantity of ammonia, which, in spite of the tinning, attacks the copper; hence the formation of ammonuriet of copper, which passes into the broth,

and is superadded to the deleterious principle of the meat itself.

*Mode of Operation of Poisons.*—An interesting question connected with the *modus operandi* of poisons has been lately submitted to experiment by M. Andouard, of Beziers, viz: Do poisons, and soluble salts, taken by the mother, reach the body of the fœtus? The following are the conclusions to which we have arrived.

1. Poison and soluble salts reach the fœtus, provided that the death of the mother does not follow instantly on the swallowing of the substance. In this last case, the placenta alone is impregnated with that substance, or, if the fœtus receive it, the quantity is so small as not to be appreciable by analysis.

2. If we have reason to suppose that a pregnant woman has died poisoned, we should not neglect to search for the poison in the placenta, the liquor amnii, and the fœtus.

M. Orfila, in an essay in the Annales d'Hygiéne, devotes himself to the refutation of two errors against which he thinks it necessary to caution those engaged in medico-legal inquiries in cases of poisoning. The first is that of requiring distinct proof that the quantity of poison discovered in the body by analysis is sufficient to destroy life; the second is that we operate more surely if we analyse a small portion of an organ (the liver for instance), than if we employ a larger quantity. It would seem scarcely necessary to occupy upwards of twenty pages in the refutation of two errors so patent as these; but as it has appeared otherwise to this distinguished authority, the subject is here briefly referred to. It must be obvious that if in every case we were to insist on the discovery in the contents of the stomach or the organs of the body of a quantity of poison sufficient to destroy life, many criminals, now justly condemned, would be allowed to escape; and that, on the other hand, if we were to prefer the use of a small portion of the contents of the stomach, or a small fragment of the liver, to a larger quantity of either, we might fail to discover a poison which nevertheless existed in sufficient quantity to be identified by operations on a larger scale. The only case in which operations of a larger scale are to be deprecated is where the reagents we employ are in such quantity as, though apparently pure, to furnish the very poison of which we are in search.

*On Copper and Lead naturally contained in the Human Body.*—M. Devergie, in a paper which forms a rejoinder to a memoir read at the academy, by MM. Danger and Flandin, in which they call in question the assertion of MM. Hervy and Devergie, that the body naturally contains a certain proportion of copper and lead, confirms his original statement by the results of a new series of experiments, performed in conjunction with M. Boutigny. The following are the conclusions at which he arrives:

1. The stomach, the intestines, and all the organs of the economy furnish, on analysis, traces of copper and lead.

2. The proportion in which these metals are found increases with age. It is small in the new-born infant; it is much more considerable in the adult.

3. A chronic malady, during which the food is greatly diminished, appears singularly to lessen the quantity of copper and lead in the organs of the body.

4. This difference confirms the natural supposition that the source of these metals is the meat and vegetables used as food.

5. In all cases the proportion of copper is greater than that of lead.

The theory that the copper and lead naturally contained in the human body is supplied by the food is strongly supported by the fact that copper has been found in wheat, barley, rye, oats, rice, tea, coffee, sugar, sorrel, chicory, chocolate, gelatin, the flesh of the ox, &c; and that it gives its green color to sorrel, spinach, and gherkins. The use of copper vessels in cookery will also account for the introduction of the metal into the body.

*Action of Charcoal on solutions of Metallic Salts.*—Chevallier has instituted a series of experiments on this subject, to which his attention was directed in consequence of having to examine wine largely impregnated with lead, but which, after being decolorized by animal charcoal, was found to have lost all trace of the metal. The author in the present communication limits himself to the salts of lead, in respect to which he establishes the following facts:—That vegetable charcoal, unwashed animal charcoal, and animal charcoal washed and purified from carbonates and phosphates, not only, as is well known, form with coloring matters, insoluble precipitates, but unite with metallic oxides, so as to separate them from the acids with which they are combined. Charcoal has this effect on aqueous, acetous, alcoholic, and vinous

solutions of the salts of lead, though vegetable acts more feebly than animal charcoal. This property which charcoal has of separating the metallic oxides from their solutions M. Chevallier thinks has an important medico-legal application; for in many cases medico-legal authorities prescribe the use of animal charcoal as a decolorizing agent of metallic solutions. M. Chevallier's experiments in 1843, in ignorance of the previous reasarches of Graham.—*Ranking's Half-Yearly Abstract.*

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*The Use of Cold Water in Erysipelas.*—The cold affusion is not to be employed in all cases, nor in any without great consideration; for very serious consequences may result from its injudicious adoption. According to my experience, it is when the exanthem exhibits a livid or bluish color; when the affected skin is little swollen, but is dry and is the seat of a burning prickling heat; when the temperature of the body is unequal, the extremities being perhaps cold, while the head is hot; and when the accompanying fever is of a nervous typhoid type, that the cold affusion is sometimes of great service; indeed, the only remedy which holds out any prospect of decided advantage. When this is the case, we observe, after its employment, that the skin becomes more turgescent, that the color of the eruption is more decidedly red than it was before, that the delirium abates, and the tongue is moister —changes, which indicate that the remedy need not be repeated. If, however, the former state of things returns, it will be necessary again to have recourse to the affusion. I have seen another form of erysipelas, in which the cold affusion has been employed with signal advantage: this form prevailed epidemically in the hospital at Zurich in the year 1836. The exanthem did not come out upon the surface fully or regularly; there were only patches scattered here and there; and these appeared for a short while, and then vanished. At the same time, the sensorium was much disturbed. A few of the patients lay in a state of stupor; but in most there was a strange confusion of mind, so that they left their beds, and went about the wards, as if they were going to their ordinary work. Some of them squatted themselves down upon the floor, fancying that they were on the night-stool, or in the water-closet. In most instances, the pulse was but little excited, except towards evening; in some it was below

the natural standard. After the use of the cold affusion, the exanthem came out much more freely, the face became redder and more swollen, and altogether there was a more distinct vascular action than had existed before. In most of the patients, the effects of the douche was of short duration; it required to be repeated in the course of a few hours, and even a third time. There is still another form of the disease in which the remedy has been used with marked benefit. As we saw in our present patient that the erysipelatous affection stood still, and that the skin, under the exfoliating integument, exhibited a new redness, so we not unfrequently have occasion to observe a similar phenomenon in elderly persons, who are affected with a constant erysipelas of the face; the red patches upon the point of the nose or over the zygomatic arch, for example, being surrounded with a red ring, and presenting a shining surface. If in this state the head becomes affected, and if the patient is delirious, has a rapid weak pulse, a dry coated tongue, and the stomach is perhaps irritable to vomiting, I believe that there is no remedy that promises so much benefit as the judicious employment of the cold affusion. The old physicians in such cases recommended an emetic in the first instance, and afterwards the use of camphor and such-like stimulants; but I greatly prefer the above treatment.—*Schoenlein's Clinical Lectures.—Medico-Chirurgical Review.*

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*Influence of Menstruation upon the Exanthemata.*—The appearance of the catamenia, in the course of any of the acute exanthemata, is always to be regarded as an unpleasant symptom. Cases, indeed, occur, where the act of menstruation seems to have a truly critical salutary influence upon the existing fever; the violent pyrexial and the grave nervous symptoms subsiding immediately upon its development. But the very opposite state of things is much more common; and most experienced physicians must have met with cases where the occurrence of this secretion, during the eruptive stage of Measles, for example, has been speedily followed by alarming oppression and anxiety, and perhaps by death. If the case does not prove fatal, the eruption will generally be observed to become more or less livid, and to have petechial spots mixed with it; these spots may be distinguished from the proper exanthem, by not disappearing under the pressure

of the finger. A not unfrequent symptom in such circumstances—and one of the worst augury—is a very fetid odor of the breath, the tongue being at the same time parched, and covered with a dry brown crust. Again, when the catamenia are entirely suppressed, the prognosis must be extrmely unfavorable. It is therefore obvious that the state of this function must influence very materially our opinion as to the danger of exanthematous fevers in menstruating females. Many of the older writers have alluded to the very unfavorable change that is apt to occur in the eruption of small-pox, by the occurrence of menstruation. The pustules are apt to become livid from the admixture of a sanguinolent fluid with their contents, and the large patches of ecchymosis to make their appearance on different parts of the surface. The danger is the greater, if the catamenia occur upon the seventh or eleventh day of the exanthem.* An inexpressible oppression or anxiety is then apt to come over the patient; she feels inwardly assured (a genuine *clairvoyane*) of her approaching dissolution; her pulse becomes exceedingly weak and rapid; her feet cold; and in a few hours, perhaps, death will close the scene, although everything had, shortly before, seemed propitious and favorable.

Dissection in these cases usually discovers an unusual fluidity of the blood, and—a common consequence of this morbid state—a dark-red coloring of the inner surface of the bloodvessels; such as we frequently observe in cases of death from lightning. This appearance has been erroneously attributed to inflammation; whereas it is the mere result of imbibition or Endosmosis of the vascular parietes.—*Ibid.*

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*Intermittent character of certain diseases of the Nervous System.*—The tendency to intermittence of the symptoms, in various lesions of the cerebro-spinal system, is a circumstance that ought to be well known to medical practitioners; as they might readily fall into a serious error in their diagnosis, if they were not aware of it. In the acute hydrocephalus of children, the symptoms in the early stage of the disease very usually exhibit more or less of intermittence. I have

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* In a case of Scarlatina, related in these reports, Schoenlein advises medical men never to give a confident favorable prognosis in this disease, until the eleventh day is past.

repeatedly noticed this circumstance in the genuine disease—not to mention that form of fever which has been called *intermittens maligna cerebralis*, and which has been so often mistaken for it. In the after-part of the day, the symptoms, cerebral irritation, usually come on, and continue till about midnight; then they gradually subside, and the child appears to be almost quite well, so that its parents may probably suppose that it was nothing but a casual illness. Again, however, in the afternoon, the child becomes feverish and uneasy; and the same aggravation and subsidence of the symptoms occur as on the preceding day. This state of things will, if unchecked, continue until the pyrexia and head-distress become permanent. When such is the case, mischief has already fairly commenced, and will perhaps utterly defy the best directed efforts of the most experienced physician. In inflammatory affections of the spinal marrow also, this intermittence of symptoms is not unfrequently observed in the early stages of the morbid action.—*Ibid.*

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*Issues on the Scalp in Chronic Cerebral Diseases.*—The establishment of a caustic drain on the scalp over the suspected seat of the lesion, in cases of chronic cerebral disease, has proved in many hands a remedy of decided utility. I remember the case of a woman who suffered the most agonizing pain, notwithstanding the use of the most powerful narcotics, in consequence of the carious destruction of the petrous portion of the left temporal bone: the patient was much emaciated, and was affected with hectic fever. A potential cautery was applied over the squamous plate of the bone. As soon as the cauterized skin began to discharge, the relief was most gratifying; and the progress of the fatal event was very materially retarded. Women, who have, at some former period of life, suffered from a chronic irritation of the cerebral meninges, are apt to be affected, as life advances, with a most severe pain on the crown of the head, either along the course of the sagittal suture or a little to one side (usually to the right) of it. When such a case proves fatal, the cerebral meninges are generally found to be thickened and agglutinated together, and the glandulæ Pacchioni to be enlarged; this increase of size being sometimes so great as to have caused a considerable absorption of the bone over them. In such cases, all opiates and anti-spasmodics are utterly

useless, and perhaps decidedly injurious: the only safe and judicious remedies are repeated local bleedings, and the establishment of an issue over the seat of the lesion.

For exciting the irritability of paralysed muscles, the most important of all remedies is unquestionably *electro-Magnetism.* I have seen many remarkable cures effected by its use. Not a few cases of paralysis of the generative organs have been speedily and effectually benefited by it. *Strychnine*, also, will be found to have very remarkable powers in curing certain forms of paralytic weakness. Its employment requires much discrimination and judgment; for, if administered too early, before the cerebral lesion has been very materially modified, mischief, and not benefit, will be the result. The same remark is applicable to the use of electricity.—*Ibid.*

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*Syphilis.*—M. Cullerier has lately performed a series of experiments in order to determine the inoccubility of the lower animals, with the syphilitic poison. The result of repeated trials upon monkeys, Guinea-pigs, &c., appears to be that the disease in question is confined to the human race, as in no instance was the experimenter enabled to communicate the disease.—*Half-Yearly Abstract.*

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### PENNSYLVANIA HOSPITAL.

Our correspondent from Philadelphia writing of the Pennsylvania Hospital gives the following details which may be of interest to our readers.

Besides the regular inmates of the wards, a number of indigent persons daily present themselves for the purpose of having their diseases investigated and prescribed for, which at this season is done in the hall of the first building; during the sessions of the medical schools, if any interesting cases are presented they are brought before the students in a room appropriated to that purpose. Among those on Saturday, I saw a case of Carcinoma, originally affecting the lower lip near the right angle of the mouth, but extending now along the inner margin of the right side of the lower jaw, exposing in its ravages over this surface the sublingual salivary glands, and causing a constant flow of saliva through the opening. Commencing at the lower part of the ear, on the same side, and extending the whole length of the parotid gland, exposing also this body, is another ulcer. The patient is a native of Ireland, 55 years of age; two years ago he observed a small wart upon his lower lip, which,

together with a portion of the lip, was removed by some surgeon near Dublin; soon afterwards he sailed for this country and had hardly reached here before the disease reappeared a little to the right of its original seat. Of course, nothing was done for the miserable man, and as he walked out of the hospital he looked the picture of despair.

In the wards were a great number of fractures, particularly of the lower extremities. Many of these cases were in the persons of seamen, who met with the accidents some weeks ago while at sea during those severe gales of which you have seen an account. Most of these were difficult and aggravated cases, some of them of long standing, from having, as I said, occurred at sea where the men had not the advantage of surgical attendance.

I saw also several cases of opacity of the cornea, two or three of which supervened upon attacks of small-pox. The treatment, by leeches, nitrate of silver, and sulphate of copper, was affording decided benefit. I cannot forbear to speak of the kindness of manner and sympathy manifested by Dr. Norris, at present the attending physician, towards all the patients.

In the afternoon I visited the Anatomical Museum belonging to the University. This museum, being supported by annual appropriations made by the trustees, presents an air of great cleanliness and neatness. The alcohol contained in the thousand jars is removed every summer if at all discolored, fresh liquor supplied, the jars again covered with their six layers of cloth, varnished, labelled, and set away in their places. All the dried preparations are attended to with equal care, and by timely labor the ravages of the worms are prevented. The untiring industry and great skill of Professor Horner are seen in the large number, rareness and beauty of the specimens, preparations, and dissections. In one of the cases are to be seen casts in plaster of Paris of two limbs of persons who had anchylosed knee joints, taken both before and after the operation for that deformity, which consists in making the V excision, first proposed, I believe, by Dr. Barton. The casts taken before the operation show limbs distorted and wholly useless—those after, limbs improved in symmetry, and not less so in usefulness.

I have thought that a brief notice of the operation not long since performed by Dr. J. K. Rodgers for aneurism of the subclavian ar-

tery, of which you have seen notices in the New York journals, might not be uninteresting to you.

The subject of this operation, a man aged 35 years, was admitted into the New York Hospital in December, 1845, with aneurism of the subclavian artery of the left side. Dr. Rodgers applied a ligature just inside of the scalenus anticus muscle; pulsation ceased immediately, and the ligature came away on the thirteenth day, when a slight hemorrhage began, and persisted until the patient died on the fifteenth day after the operation.

The following are the appearances presented by the post-mortem examination: the tumor was found perfectly consolidated, as was also the artery from the ligature to the aorta; there was more than an inch of firm coagulum between the ligature and the heart; the axillary artery leading from the tumor was filled with a finely organized fibrinous clot, which adhered closely to the parietes of the vessel. The hemorrhage which caused the fatal termination appears to have proceeded from the vertebral artery, which was just on the distal side of the ligature.

The fine coagulum formed in the subclavian on its proximal side, of course, would have prevented secondary hemorrhage.

This case to my mind clearly demonstrates the feasibility of the operation in question, for had the vertebral artery been tied along with the subclavian, which Dr. Rodgers would have done had not that artery been unusually deep-seated, the patient would almost without doubt have recovered.

The specimen exhibiting all the appearances that I have just described is in the hospital museum where, after having had a history of the case from my friend, Dr. Sayre, I noted down nearly all that I have written. It is one of those cases in which the surgical world at present feels an especial interest; and certainly, I think, authorizes the hope that by the operation proposed—the application of a ligature to the vertebral and subclavian arteries at the same time—the left subclavian may in many instances be successfully ligatured.

D. W. Y.

March 29th, 1846.

## FRANKLIN MEDICAL COLLEGE OF PHILADELPHIA.

Students who may repair to Philadelphia in the coming autumn will find there four medical schools between which to choose. The Franklin Medical College takes its place in that honored sisterhood, to do service in the cause of medical education, and compete for its share of pupils and renown. At first, the impression made upon the mind by the annunciation that a *fourth* school has been opened in Philadelphia, is, that our brethren in the city of brotherly love are over-doing the thing, and that some of these new enterprises must prove a failure. Such, for a long time, was the impression in respect to the Jefferson Medical College; but after years of hard toil, many changes of professors, and many reverses, it has at last fixed itself firmly in public confidence, and now vies in the number of its pupils with its ancient rival, the University. In the meantime a third school, the Pennsylvania Medical College, was set on foot, and seems to be enjoying a satisfactory amount of success. And still the *old* School, the University, is as prosperous as ever. For nearly twenty years before the Jefferson Medical College was chartered, the classes at the University amounted to more than four hundred; but very seldom were they larger than the class which rewarded the labors of the professors during the season which has just closed. The effect, therefore, of the multiplication of schools in Philadelphia has been to attract students in still increasing numbers to that city, and not to cripple those first established. So long as this continues to be the case there can be no objection to an increase. Beyond a certain number it is not desirable that students should congregate in rooms where much of the teaching must be demonstrative. When that number is exceeded, hearing becomes very uncertain, and seeing quite impossible.

But on the other hand, in the present rage for creating medical schools it is very probable that many will be started which cannot for a long time attract such classes as will make it an object with men of talents and learning to hold places in them. The effect of this upon the character of the profession is easily foreseen. As it is for the benefit of students that the rooms be not too much crowded, so is it equally essential to teachers that they have something more before them than empty benches. But empty benches must be the allotment of some, if the present rate of increase should continue.

We do not believe, however, that this will be the share of our friends of the Franklin Medical College. A number of them are already known to fame; some of them have enjoyed experience as teachers, and their success cannot be looked upon as doubtful. We subjoin a list of their names and professorships.

Paul Beck Goddard, M.D., Anatomy and Histology.

C. C. Van Wyck, M.D., Principles and Practice of Surgery.

Meredith Clymer, M.D., Principles and Practice of Medicine.

John Barclay Biddle, M.D., Materia Medica and Therapeutics.

David Hunter Tucker, M.D., Obstetrics and Diseases of Women and Children.

Levin S. Joynes, M.D., Physiology and Legal Medicine.

James B. Rogers, M.D., General and Organic Chemistry.

Demonstrator of Anatomy, Joseph Leidy, M.D.

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MEDICAL COLLEGE OF MEMPHIS.

From the Memphis newspapers we learn that the projected medical college of that city is getting under way. The trustees have made the following appointments: J. M. Bybee, M.D., to be professor of Anatomy; D. J. M. Doyle, M.D., professor of Surgery; A. Hopton, M.D., professor of Chemistry and Pharmacy; G. R. Grant, M.D., professor of Theory and Practice. The board advertise for professors to take the chairs of Institutes and Medical Jurisprudence, Materia Medica, and Obstetrics; application to be made to the Secretary of the Board before the third day of July. It is promised that "the names of the successful candidates only will be made public."

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UNIVERSITY OF MARYLAND.

We have received the annual catalogue of students who attended lectures in the medical department of this institution during the last winter, from which we learn that the number was 147. From the circular appended, it appears that the fees for tickets have been reduced from twenty dollars to fifteen, and as the number of profes-

sors is but six the total of expences for the lectures is but ninety dollars. It is announced, in a note, that Dr. Power, having received the appointment of Lecturer on the Theory and Practice of Medicine, will discharge the duties of that chair until Professor Bartlett, who is now in Europe, returns. Are we to understand from this that Professor Bartlett is expected to return to the school in Baltimore? Is he to be professor at the same time in the University of Maryland and Transylvania University?

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### THE MEDICAL PROFESSION OF THE UNITED STATES.

It must be admitted that we, the physicians of the United States, are very much dissatisfied with ourselves. On all sides we hear complaints of the state of the profession—of defects in medical schools and in primary education—of the progress of quackery, and the necessity for a higher standard in medicine. No one, we believe, has gone quite so far in depreciating his profession as Dr. J. N. Davis, the projector of the New York Medical Convention. In the Circular, of which he is the author, addressed to the medical societies and colleges of the country, he holds the following language. We find it quoted by Professor Paine in his Valedictory Lecture. It so happens that we did not read the Circular, and this must be our apology to our brethren for not vindicating them from such aspersions. The quotation runs as follows:

"There may, indeed, be found here and there, a mind, so endowed by nature, that despite of all the contracting and evil influences of such a system, will rise superior to every obstacle, and shaking off one embarrassment after another, will roam over, and revel in, all the fields of science untrammeled and free. And it is such that constitute the ornament and honor of our profession.

"But far otherwise is it with the great mass; the ninety nine out of every hundred. With no practical knowledge of chemistry and botany; with but a smattering of anatomy and physiology, hastily caught during a sixteen weeks' attendance on the ana omical theatre of a medical college; with still less of real pathology; they enter the profession, having mastered just enough of the details of practice to give them the requisite self-assurance for commanding the confidence of the public; but without either an adequate fund of knowledge, or that degree of mental discipline, and habits of patient study, which will enable them ever to supply their defects.

Hence they plod on through life, with a fixed routine of practice, consisting of calomel, antimony, opium, and the lancet, almost as empyrically applied as is cayenne pepper, lobelia, and steam, by another class of men. And how can this ever be otherwise, while medical students, without regard to their previous qualifications, are shut up three years in the office of a country or village physician, sent out to one or two courses of lectures, and then honored with the title of M.D.? Indeed so radical are the defects in our present system of medical education, and so glaring are their effects on the condition and usefulness of the profession, that no observing man will charge us with exaggeration in the foregoing statements."

If a copy of Professor Paine's lecture has been sent to us we have been so unfortunate as not to receive it, and it was only a few days since that we had the pleasure of meeting with it on the table of a friend. From the title-page we perceive that in the short space of one month the lecture has reached the *sixth* edition. The reader will not be surprised to hear of this unusual popularity, when he is told that the lecture is a "defence of the medical profession in the United States" against these charges. Dr. Paine has long maintained that as practitioners, American physicians are the best in the world. He is sensible to defects which exist; he admits that much may be done towards correcting them by wise concert of action; but he is naturally indignant at such accusations as those of which specimens are given in the paragraphs above quoted. His defence is a manly one, and we wish it could be read by every physician in the United States. We are glad to learn that it has already attracted so much attention, and hope the interest it has awakened will not soon subside.

On one point Professor Paine is eminently successful;—he shows conclusively, that the author of the Circular is not himself a scholar. But we are not able to perceive that he helps his argument for the American profession, by proving that a member who sets up to be one of its leaders is not able to spell his own language. Such proof may be very unfortunate for the projector of the convention, but it cannot be said to reflect much credit upon the profession, "the standard" of which he professes such a solicitude to raise. In an evil hour, this gentleman addressed the Circular calling the Convention to the Faculty of the New York University, and Dr. Paine publishes it to the world as it was written. Here it is.

"The above Circular," says the Chairman, "is an Extract from

the proceedings of the New York State Medical Society at its last *anual* meeting in Feb., 1845. The object of the proposed convention is sufficiently indicated in the preamble and resolutions itself. The Committee, in the discharge of their duty, have corresponded with the Medical Societies and Colleges in all the States where such institutions exist, and the replies which have been received are *unanymously* in favor of the proposed convention.

"Indeed, several Colleges have already appointed delegates; consequently, there is no longer any doubt but that a convention *will be held*. If the subject has not already been before the Faculty of the Medical Department of the University, will you not, without further delay, bring it to their *notise?*

"(Signed,) J. N. DAVIS."

The italics are Dr. Paine's; the spelling is Dr. Davis's own. The extracts need no comments. One, as he reads them, can hardly help recalling to mind the wise caution given to dwellers in "glass houses;" but, alas, how seldom is vouchsafed to us the inestimable "gift" of "seeing ourselves as others see us!"

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A CORRECTION.

We take great pleasure in complying with the request of the publishers of Ellis's Medical Formulary, Messrs. Lea & Blanchard, to insert the following correction of a serious error in that work, and beg leave to call the attention of our readers to it.

"*Ellis's Medical Formulary.—Correction.*—The publishers of this work respectfully request those persons who have the seventh edition, to correct a typographical error for the "*Medicated Hydrocyanate of Potassium,*" at page 83; wherein the symbol for an ounce is used in place of that for a drachm. The following is the correct prescription, and corresponds with the proportions directed in all the previous editions of the work:

℞ Potassii hydrocyanici medicati, ʒj.
Aquæ destillatæ, Oj.
Sacchari purificati, ℥iss.
Fiat solutio.—Dose, a table-spoonful, night and morning.

### THE NATIONAL CONVENTION.

From all the indications of the day it is now pretty evident, that the proposed medical convention in New York will not be *national*. We have stated heretofore, that the University of Pennsylvania and the Medical Institute of Louisville will not be represented in it.—We learn that the Ohio Medical College, and the St. Louis and Boston medical schools also decline sending delegates. From the tone of Professor Paine's valedictory lecture it is quite certain the University of New York will not take part in it. All this is to be regretted. A convention in the right spirit, national in feeling and aim, composed of representatives from every part of the country, would be felt in its elevating influences by the profession in all the length and breadth of the land. But we begin to doubt whether the eyes of any now living will ever be gladdened by the sight of such a convention.

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### VOYAGE OF A NATURALIST.

We recommend to all who have a taste for natural history two neat little volumes, from the press of the Harpers, under the above title; they are from the pen of CHARLES DARWIN, M.A., F.R.S., and are among the most engaging that we have ever read. Every physician needs occasionally to turn away from his professional studies, and for the warm season which is approaching we do not know a book that would constitute a more delightful or instructive companion than the *Voyage of a Naturalist*. It abounds in details of singular interest, touching geology, botany, and every department of zoology. The publishers have brought all American fathers under obligations, by adding these volumes to the stock of our literature; eminently adapted as they are to inspire the young with a taste for reading, and for the study of natural history.

# FACTS FROM CORRESPONDENTS.

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### A CASE OF ILEUS RELIEVED BY TOBACCO.

By T. W. Fry, M.D., of Crawfordsville, Indiana.

Mrs. Winters, 69 years of age, suffered from a severe attack of intermittent fever last fall, and continued delicate and feeble through the winter. On the 16th of March she was seized with symptoms of colic, accompanied by constant efforts at vomiting. A potion of tinct. opii and sulph. ether gave but temporary relief. On the morning of the 17th vomiting returned, and some bilious matter was thrown up; an emetic of ipecacuanha was now ordered, which relieved the stomach of a large quantity of bile. The sickness and pain having subsided to some extent, cathartic medicines, followed by saline mixtures, were had recourse to, but without any good effect. The pain returning with greater violence, the bowels becoming more swollen, accompanied by copious and frequent discharges of feculent matter from the mouth, now indicated more clearly the nature of the difficulty; and as all medicine taken into the stomach for the purpose of acting on the bowels only increased the sickness, pain, and vomiting, reliance was placed entirely upon opiates and injections. Tinct. opii 30 drops was given, followed in fifteen minutes by one-fourth of a grain of sulph. morphine; injections of salt water and castor oil frequently repeated, were immediately expelled without producing any action on the bowels, except one small discharge of opaque mucus. An injection of tobacco was now given with the same result. The bowels seeming incapable of retaining fluid matter, a suppository made in the following manner, was introduced into the rectum: a drachm of strong tobacco steeped in a gill of hot water was added to two tablespoonsful of sugar, and boiled to the consistence of wax. This was retained several hours, and the patient beginning to feel an inclination to stool, another injection was administered, which came away with a copious discharge from the bowels, and entire relief to the patient.

The discharge of feculent matter by the mouth, which continued up to the time of the introduction of the suppository, now ceased, and the patient, although prostrated to an alarming extent, her constitution being

much impaired by age, recovered with great rapidity. Counter-irritation on the abdomen was kept up through the whole course of the disease by means of hot salt and mustard alternately applied.

The progress of this case, and of one terminating fatally which came under my observation last spring, convinces me that aperients in severe cases of ileus are only productive of evil.

March 27th, 1846.

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A CASE OF HEMOPTYSIS AND MENORRHAGIA SUCCESSFULLY TREATED BY TARTRATE OF IRON.

By D. E. Harrison, M.D., of Garrard county, Ky.

Mrs. King, æt. 40 years, of feeble constitution, the mother of eight children, the youngest of which being two years old, was attacked suddenly on the 16th of November last with spitting of blood, and in a few hours discharged what was supposed to amount to half a gallon. I found her on the same day pale, insensible, pulseless at the wrist, breathing quick, and with cold extremities. No abnormal sounds could be detected on percussion in any part of the lungs. Stimulants and astringents having been administered, the hemorrhage soon ceased, and the patient regained her consciousness. On inquiring into the history of her case I was informed that she had been subject to hemoptysis during the long period of fifteen years, the hemorrhage being very much increased at her catamenial terms; and I was also told that the complaint was hereditary. Her health had suffered seriously by the drain, as well, probably, as by the long-continued use of medicines prescribed for its suppression. The uterine discharge, it was stated, consisted of blood which coagulated like that from the lungs.

Having just read the lectures of Dr. Buck published in the Western Journal, I was encouraged to try chalybeates and a nourishing diet, with a view to the improvement of the quality of her blood. Accordingly I put her upon the use of tartrate of iron, in doses of 8 grains gradually increased to 12 grains, three times daily, in pills combined with a little rhubarb so as to keep the bowels soluble. The improvement in her case was speedily manifest. Her complexion became healthful; her strength increased daily; she had no return of the pulmonary hemorrhage: her menses became regular, and on the 15th of the present month I ceased to attend her, considering her cured.

March 23d, 1846.

CONVULSIONS FROM DYSENTERY AND INTERMITTENT FEVER.

On the 7th of April, about 4 o'clock in the afternoon, a practitioner of this city was called, in quick succession, to a child two years of age, and a boy aged ten years, both of whom had been seized with convulsions about the same moment. A storm of wind and rain had prevailed during the day. The convulsions in the child were violent, and were followed by dysenteric symptoms which persisted for several days. In the boy the system was less convulsed, and he remained comatose for more than an hour—in fact, until relieved by venesection, which restored him to consciousness. The pupils of his eyes were much dilated, and his pulse was intermittent. During the autumn he had suffered with chills and fever, and they had recurred once or twice in the course of the winter. At this time the attack had been preceded by a cold, with pleuritic symptoms. Calomel and ipecac. were administered, after the venesection; his side was blistered, and on the subsidence of fever quinine was given. Two days after the convulsion a febrile paroxysm occurred, during which the pain in his side and head was much increased, and his cough was almost incessant. By the employment of quinine other paroxysms were obviated, and he had a rapid convalescence.

In the few days of this boy's illness, his father, mother, and grandmother had each a chill. In the fall as many as seven of the family, or about half, sometimes suffered with the chills on the same day. Quinine was found effectual in arresting the disease for the time; but on slight exposure it returned. Iron was the remedy indicated under such circumstances.

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TINCTURE OF IODINE IN THE TREATMENT OF PORRIGO.

Dr. F. W. Todd, of Port Gibson, Miss., informs us that he has found the *Tincture of Iodine*, employed locally, "invaluable in the treatment of that obstinate disease, Porrigo." He has used it in all forms of the disease whether mild or severe, and in no instance has it failed to effect a cure. In the more active forms, poultices and fomentations preceded the application of the iodine.